					ST DEPARTMENT DIVISION C		URAL RESC		3		AMENI	FC DED REPOI	RM 3	
		AF	PPLICATION FO	OR PERM	IIT TO DRILL					1. WELL NAME and N	JMBER NBU 921	-22L4BS		
2. TYPE C	F WORK	DRILL NEW WELL	REENTER	P&A WELL	_ DEEPEN	WELL (	)			3. FIELD OR WILDCAT				
4. TYPE O	F WELL				hane Well: NO					5. UNIT or COMMUNI	TIZATION NATURAL		ENT NAM	1E
6. NAME	OF OPERATOR		KERR-MCGEE OIL							7. OPERATOR PHONE				
8. ADDRE	SS OF OPERAT	OR			<u> </u>					9. OPERATOR E-MAIL	L			
	AL LEASE NUM	BER	P.O. Box 173779		INERAL OWNERS	SHIP				12. SURFACE OWNER		anadarko	.com	
(FEDERA	_, INDIAN, OR S	<b>TATE)</b> JTU 010950-A		FEC	DERAL (IN INC	DIAN 🔵	STATE (	) FEE			DIAN 📵			EE 💮
13. NAME	OF SURFACE	OWNER (if box 12 :	= 'fee')							14. SURFACE OWNER	R PHONE	(if box 12	= 'fee')	
15. ADDR	ESS OF SURFA	CE OWNER (if box	12 = 'fee')							16. SURFACE OWNER	R E-MAIL	(if box 12	! = 'fee')	
	N ALLOTTEE O	R TRIBE NAME			TEND TO COMM		RODUCTION	FROM		19. SLANT				
(II box 12	,	te Indian Tribe		YES	S (Submit C	Commingli	ing Applicati	on) NO		VERTICAL DIF	RECTION	AL 📵 H	HORIZON	ΓAL 🔵
20. LOC	ATION OF WELL	-		FOOTAGE	ES	QTF	R-QTR	SE	CTION	TOWNSHIP	R/	ANGE	МЕ	ERIDIAN
LOCATIO	N AT SURFACE		167	2 FSL 67	5 FWL	NV	NSW		22	9.0 S	2	1.0 E		S
Top of U	ppermost Proc	lucing Zone	174	4 FSL 82	4 FWL	NV	NSW	:	22	9.0 S	2	1.0 E		S
At Total	Depth		174	4 FSL 82	4 FWL	NV	WSW	:	22	9.0 S	2	1.0 E		S
21. COUN	ITY	UINTAH		22. DI	STANCE TO NEA	REST LEA		eet)		23. NUMBER OF ACRI	ES IN DRI		IT	
					STANCE TO NEA	or Compl	leted)	POOL		26. PROPOSED DEPTI		TVD: 111	21	
27. ELEV	ATION - GROUN	ID LEVEL		28. BC	OND NUMBER	217	7			29. SOURCE OF DRIL				
		4882				WYB00	00291			WATER RIGHTS APPR	OVAL NU 43-8		PPLICAB	LE
					Hole, Casing	, and Ce	ement Info	rmation	n					
String	Hole Size	Casing Size	Length	Weight			Max Mu			Cement		Sacks	Yield	Weight
Surf	11	8.625	0 - 2840	28.0	J-55 LT	1&C	0.	.2		Type V Class G		180 270	1.15	15.8 15.8
Prod	7.875	4.5	0 - 11126	11.6	HCP-110	LT&C	13	.0	Prei	mium Lite High Stre	ngth	350	3.38	12.0
										50/50 Poz		1580	1.31	14.3
					A	TTACH	MENTS					1		•
	VEF	RIFY THE FOLLO	WING ARE AT	FACHED	IN ACCORDAN	ICE WITI	H THE UTA	AH OIL A	AND GAS	CONSERVATION G	ENERA	L RULES		
<b>⊮</b> w	ELL PLAT OR M	AP PREPARED BY I	LICENSED SURVE	YOR OR E	NGINEER		СОМ	PLETE D	RILLING PI	_AN				
AF	FIDAVIT OF STA	ATUS OF SURFACE	OWNER AGREEN	MENT (IF FE	EE SURFACE)		FORM	1 5. IF OP	ERATOR IS	S OTHER THAN THE LE	EASE OW	NER		
<b>I</b> DII	RECTIONAL SU	RVEY PLAN (IF DIR	ECTIONALLY OR	HORIZON	ITALLY DRILLED	))	торо	GRAPHI	CAL MAP					
NAME La	iura Abrams			TITLE R	egulatory Analyst	t II			PHONE 7	20 929-6356				
SIGNATU	IRE			DATE 0	5/01/2012				EMAIL La	aura.Abrams@anadarko	o.com			
	BER ASSIGNED 047525830			APPROV	/AL				Bol	Rejill				
									Perm	it Manager				

NBU 921-22L Pad Drilling Program

1 of 4

## Kerr-McGee Oil & Gas Onshore, L.P.

NBU 921-22L4BS
Surface: 1672 FSL / 675 FWL NWSW
BHL: 1744 FSL / 824 FWL NWSW

Section 22 T9S R21E

Unitah County, Utah Mineral Lease: UTU 010950-A

## **ONSHORE ORDER NO. 1**

## DRILLING PROGRAM

## 1. & 2.a <u>Estimated Tops of Important Geologic Markers</u>: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,562'	
Birds Nest	1,882'	Water
Mahogany	2,389'	Water
Wasatch	4,934'	Gas
Mesaverde	7,845'	Gas
Sego	10,049'	Gas
Castlegate	10,115'	Gas
MN5	10,521'	Gas
TVD =	11,121'	
TD =	11,126'	

2.c Kerr McGee Oil & Gas Onshore LP (Kerr McGee) will either drill to the the Blackhawk formation, which is part of the Mesaverde formation, or the Wasatch/Mesaverde formation. If Kerr McGee drills to the Blackhawk formation (part of the Mesaverde formation), please refer to MN5 as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr McGee drills to the Wasatch/Mesaverde formation please refer to Sego as the bottom formation. The attached Wasatch/Mesaverde Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the depths the Wasatch/Mesaverde formations are found.

NBU 921-22L Pad Drilling Program 2 of 4

## 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

## 4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

## 5. Drilling Fluids Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

## 6. Evaluation Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

## 7. <u>Abnormal Conditions</u>:

## 7.a Blackhawk (Part of Mesaverde Formation) Target Formation

Maximum anticipated bottom hole pressure calculated at 7,340 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,944 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

## 7.b Wasach/Mesaverde Target Formation

Maximum anticipated bottom hole pressure calculated at 6,431 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,206 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

## 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

## 9. <u>Variances:</u>

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program Onshore Order #2 – Air Drilling Variance

 $Kerr-McGee\ Oil\ \&\ Gas\ Onshore\ LP\ (KMG)\ respectfully\ requests\ a\ variance\ to\ several\ requirements\ associated\ with\ air\ drilling\ outlined\ in\ Onshore\ Order\ 2$ 

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

NBU 921-22L Pad Drilling Program
3 of 4

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

## Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

## Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

## Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

## Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

NBU 921-22L Pad Drilling Program
4 of 4

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

## Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

## 10. Other Information:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

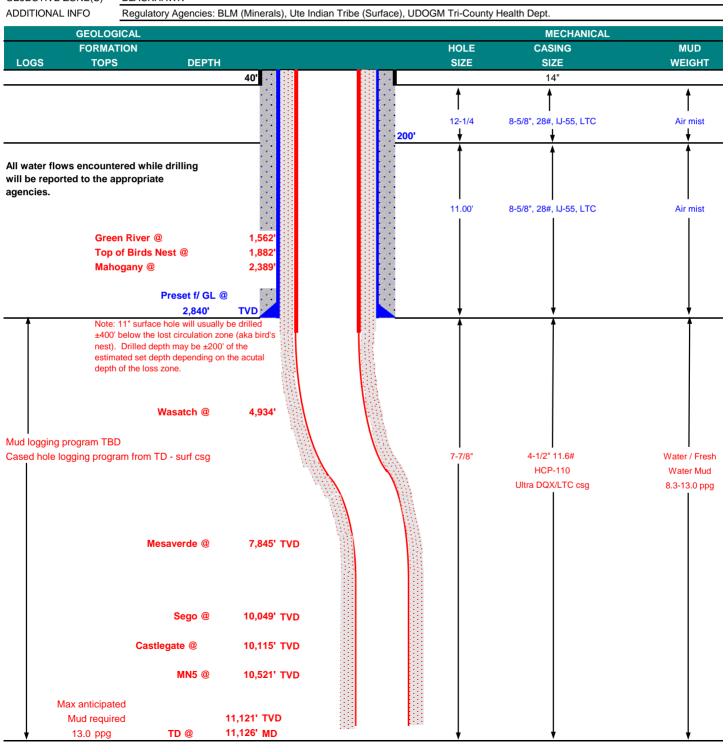
NBU 921-22L Pad Drilling Program

1 of 2



# KERR-McGEE OIL & GAS ONSHORE LP BLACKHAWK DRILLING PROGRAM

COMPANY NAME KER	R-McGEE OIL &	GAS ONSHORE	LP		DATE	December	21, 2011		
WELL NAME NB	U 921-22L4B	S			TD	11,121'	TVD	11,126' MD	
FIELD Natural Butte	S	COUNTY	Uintah S	STATE Utal	h	FINIS	HED ELEVATION	4,882'	
SURFACE LOCATION	NWSW	1672 FSL	675 FWL	Sec 22	T 9S	R 21E			
	Latitude:	40.018920	Longitude:	-109.54	4913		NAD 83		
BTM HOLE LOCATION	NWSW	1744 FSL	824 FWL	Sec 22	T 9S	R 21E			
	Latitude:	40.019116	Longitude:	-109.54	4381		NAD 83		
OBJECTIVE ZONE(S)	BLACKHAWK								
ADDITIONAL INFO	Regulatory Age	ncies: BLM (Min	erals), Ute India	an Tribe (Su	rface), U	DOGM Tri-Cou	inty Health Dept.		



NBU 921-22L Pad Drilling Program
2 of 2



## KERR-McGEE OIL & GAS ONSHORE LP BLACKHAWK DRILLING PROGRAM

**DESIGN FACTORS CASING PROGRAM** LTC DQX BURST **COLLAPSE TENSION** SIZE. INTERVAL WT GR. **CPLG** 0-40 CONDUCTOR 14' 3,390 348,000 N/A 1,880 **IJ-55 SURFACE** 8-5/8" 0 2,840 28.00 LTC 1.89 1.41 5.00 N/A 10,690 279,000 367,174 **PRODUCTION** 0 5,000 11.60 HCP-110 DQX 4-1/2" to 1.19 1.15 3.55

HCP-110

LTC

1.19

1.15

4.90

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

5,000

to

4-1/2"

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

11.60

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

11,126

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

### **CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
TOP OUT CMT	(6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			NOTE: If well will circulate water t	o surface, op	tion 2 will be	utilized	
Option 2	LEAD	2,340'	65/35 Poz + 6% Gel + 10 pps gilsonite	220	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
TOP O	UT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,426'	Premium Lite II +0.25 pps	350	35%	12.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,700'	50/50 Poz/G + 10% salt + 2% gel	1,580	35%	14.30	1.31
			+ 0.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

## **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

**PRODUCTION** 

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.  $\!\square$ 

1 centralizer on the first 3 joints and one every third joint thereafter.

## ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Survev	's will	be	taken	at	1.000'	minimum	intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized

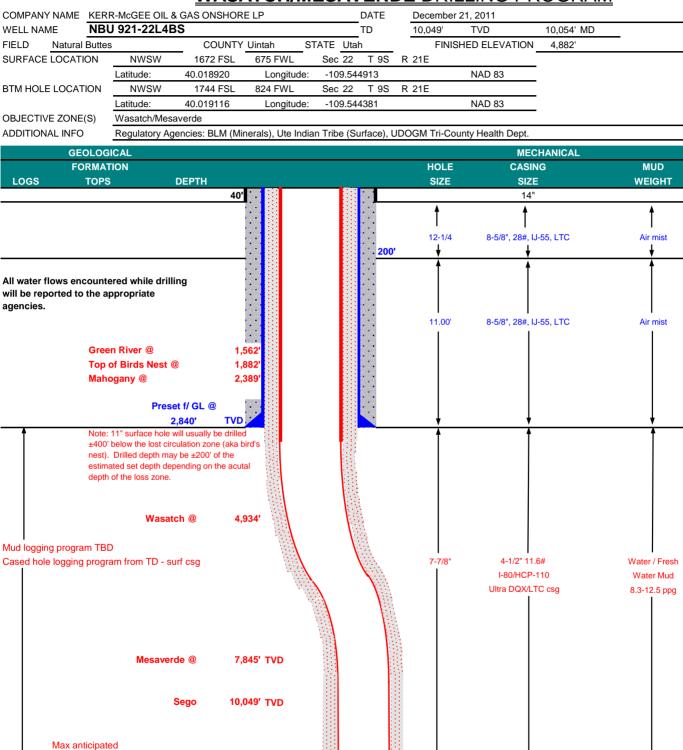
	Most flys have FVT System for thu	d monitoring. If no F v i is available, visual monitoring will be utilized.		
DRILLING	ENGINEER:		DATE:	
		Nick Spence / Danny Showers / Chad Loesel	-	
DRILLING	SUPERINTENDENT:		DATE:	
		Kenny Gathings / Lovel Young	_	

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

NBU 921-22L Pad Drilling Program
1 of 2



# KERR-McGEE OIL & GAS ONSHORE LP WASATCH/MESAVERDE DRILLING PROGRAM



10,049' TVD

10,054' MD

TD@

Mud required

12.5 ppg

NBU 921-22L Pad Drilling Program 2 of 2



## KERR-McGEE OIL & GAS ONSHORE LP

WASATCH/MESAVERDE DRILLING PROGRAM

#### **CASING PROGRAM DESIGN FACTORS** LTC DQX INTERVAL GR. CPLG. **BURST** COLLAPSE **TENSION** SIZE WT. CONDUCTOR 14" 0-40' 3,390 1,880 348,000 N/A **SURFACE** 28.00 **IJ-55** 8-5/8" 2,840 LTC 1.89 1.41 5.00 N/A 6,350 267,035 7,780 **PRODUCTION** 4-1/2" 5,000 11.60 I-80 DQX 0.97 2.83 1.11 10,690 8,650 223,000

HCP-110

LTC

1.53

**Surface Casing:** 

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

5.000

4-1/2"

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**Production casing:** 

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

10,054

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

## **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	T	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
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SURFACE		NOTE: If well will circulate water to	surface, opt	ion 2 will be	utilized		
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		+ 0.25 pps Flocele + 3% salt BWOW					
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	4,434'	Premium Lite II +0.25 pps	350	35%	12.00		3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAIL	5,620'	50/50 Poz/G + 10% salt + 2% gel	1,330	35%	14.30		1.31
		+ 0.1% R-3					

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

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## ADDITIONAL INFORMATION

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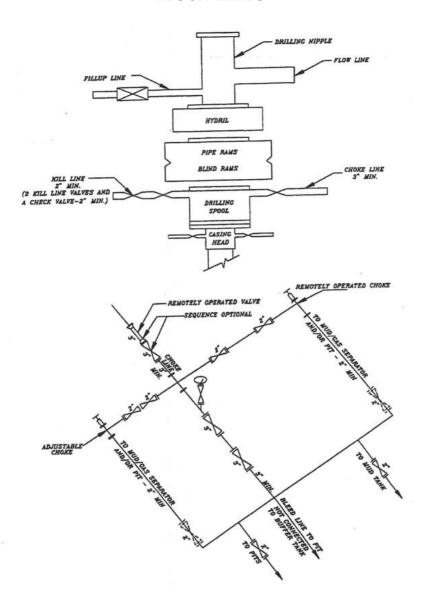
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

	Surveys will be taken at 1,000' minir	num intervals.		
	Most rigs have PVT System for much	monitoring. If no PVT is available, visual monitoring will be utilized		
DRILLING	ENGINEER:		DATE:	
		Nick Spence / Danny Showers / Chad Loesel		
DRILLING	SUPERINTENDENT:		DATE:	

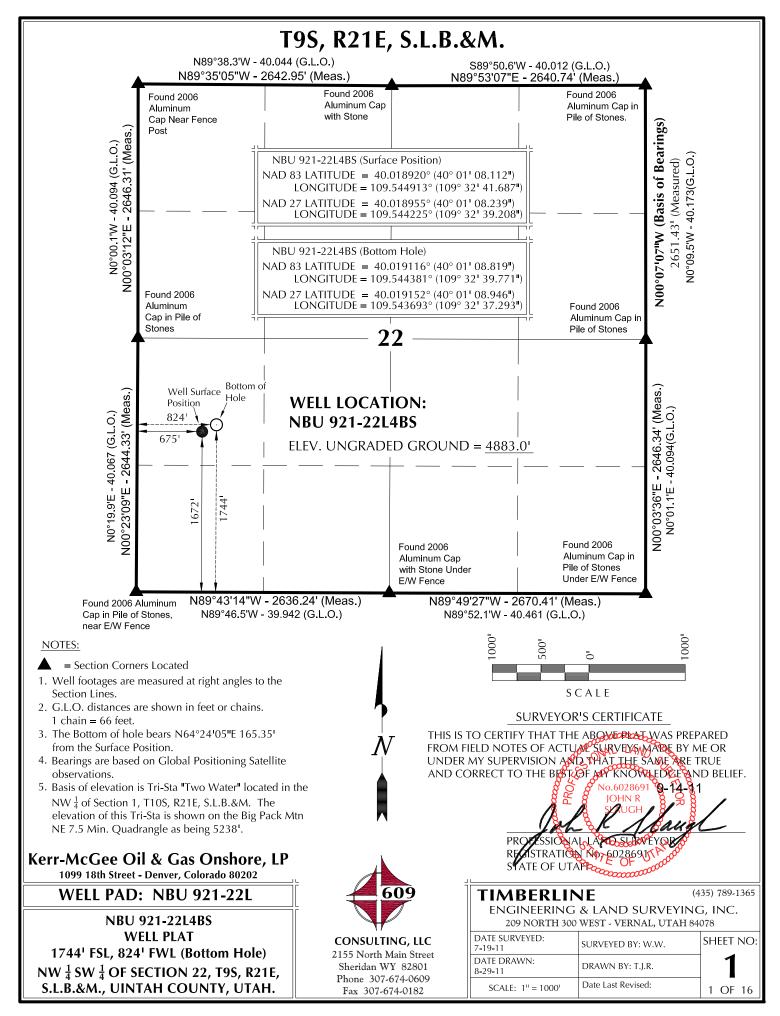
Kenny Gathings / Lovel Young

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

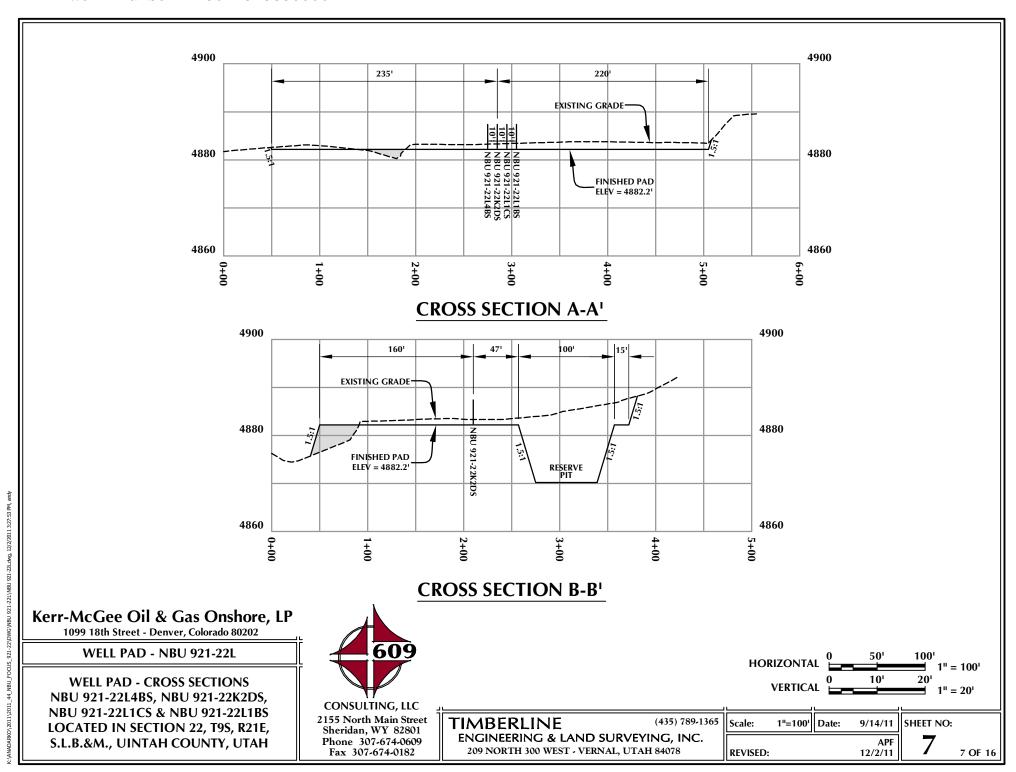
EXHIBIT A NBU 921-22L4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



			141.687"         40°01'08.239"         109°32'39.208"         1672' FSL         40°01'08.819"         109°32'39.771"         40°01'08.946"         109°32'37.293"         1744' FSL           4913°         40.018955°         109.544225°         675' FWL         40.019116°         109.544381°         40.019152°         109.543693°         824' FWL           141.805"         40°01'08.200"         109°32'39.327"         1668' FSL         40°01'11.686"         109°32'27.413"         40°01'11.813"         109°32'24.936"         2038' FSL           4946°         40°01'08.162"         109°32'39.445"         666' FWL         40.019913°         109.540948°         40.019948°         109.540260°         1784' FWL           141.924"         40°01'08.162"         109°32'39.445"         1664' FSL         40°01'12.099"         109°32'37.49"         40°01'12.226"         109°32'37.268"         2076' FSL           4979°         40.018934°         109°52'39.564"         1660' FSL         40°01'15.379"         109°32'39.722"         40°01'05.156"         109°32'37.243"         2408' FSL           40.018923°         109.544323°         648' FWL         40.020939°         109.544367°         40.020974°         109.543679°         824' FWL           142.367"         40°01'08.148"         109°32'37.988"         1662' FSL<									
WELL NAME  NBU 921-22L4BS  NBU 921-22L1CS  NBU 921-22L1BS  NBU 921-22L  WELL NAME  NBU 921-22L4BS		D83			OLT LIDE	50071655						50074656
NBU	<b>LATITUDE</b> 40°01'08.112	" 109°32'41.68										
921-22L4BS	40.018920°	109.544913°	40.01895	55° 109.54	4225°	675' FWL	40.019	116°	109.544381°	40.019152°	109.543693°	824' FWL
	40°01'08.073 40.018909°	" 109°32'41.80 109.544946°										
NBU	40°01'08.035	" 109°32'41.92	24" 40°01'08	.162" 109°32	'39.445"	1664' FSL	40°01'	12.099"	109°32'39.747	" 40°01'12.226"	109°32'37.268"	2076' FSL
	40.018899° 40°01'07.996	109.544979° " 109°32'42.04										
	40.018888° 40°01'08.021	109.545012°	40.01892	3° 109.54	4323°	648' FWL	40.020	939°				
	40.018895°	109.545102°	40.01893	0° 109.54	4413°	623' FWL						
WELL NAME	NORTH	EAST								WELL NAM	AE NORTH	EAST
NBU	71.4'	149 1' N	NBU			31 NBU				NBU	747 21	
921-221463			721-22K2D3			921-22	1	•	1	921-22L1B	<u>,                                     </u>	
	THE N S.L.B.& GLOB, OBSER	E ¼ OF SECTII &M. WHICH I AL POSITION EVATIONS TO	ON 22, T9S, S TAKEN FR IING SATELI ) BEAR NOO : NBU 92	R21E, :OM -ITE °07'07 <b>"</b> W.	1 AZ=13620	10H monogon (10 Bottom Holl 10 Botto	/ 22L4BS	A64 N64		<b>M</b>	Hole 	1.09
	8th Street - D	& Gas Oi enver, Colora NBU 92	do 80202	LP		609		TI	MBERI		CALE (4	35) 789-1365
				<u> </u> -	1			11	NGINEERI	NG & LAND	SURVEYING	G, INC.
		ERFEREN								300 WEST - VEH	RNAL, UTAH 84	
		L4BS, NBU				ULTING, LL		DATI 7-19-	E SURVEYED: -11	SURVEYED E	BY: W.W.	SHEET NO:
		& NBU 921				orth Main Stre an WY 8280:		DATI	DRAWN:	DRAWN BY:	: T.I.R.	5
		TION 22, T \H COUNT				307-674-060		8-29-		Date Last Re		J
3.1.0.0	uri., UINTA	III COUNT	i, O IAII.		Fax 3	07-674-0182		<u></u> s	CALE: 1" = 60'	12-02-11 T.J.		5 OF 16



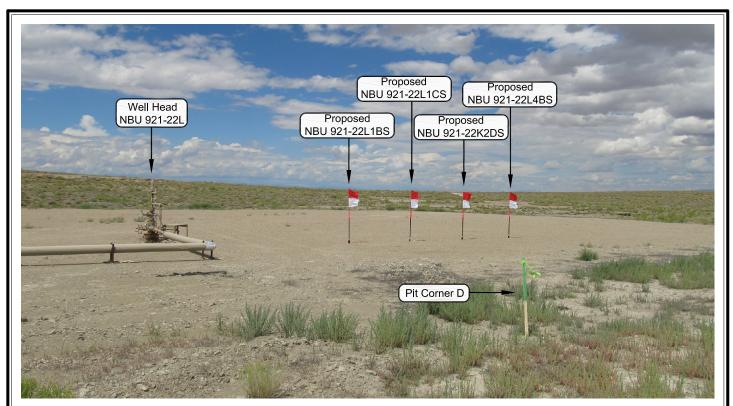


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

**CAMERA ANGLE: NORTHEASTERLY** 



PHOTO VIEW: FROM EXISTING ACCESS ROAD

**CAMERA ANGLE: WESTERLY** 

Kerr-McGee Oil & Gas Onshore, LP

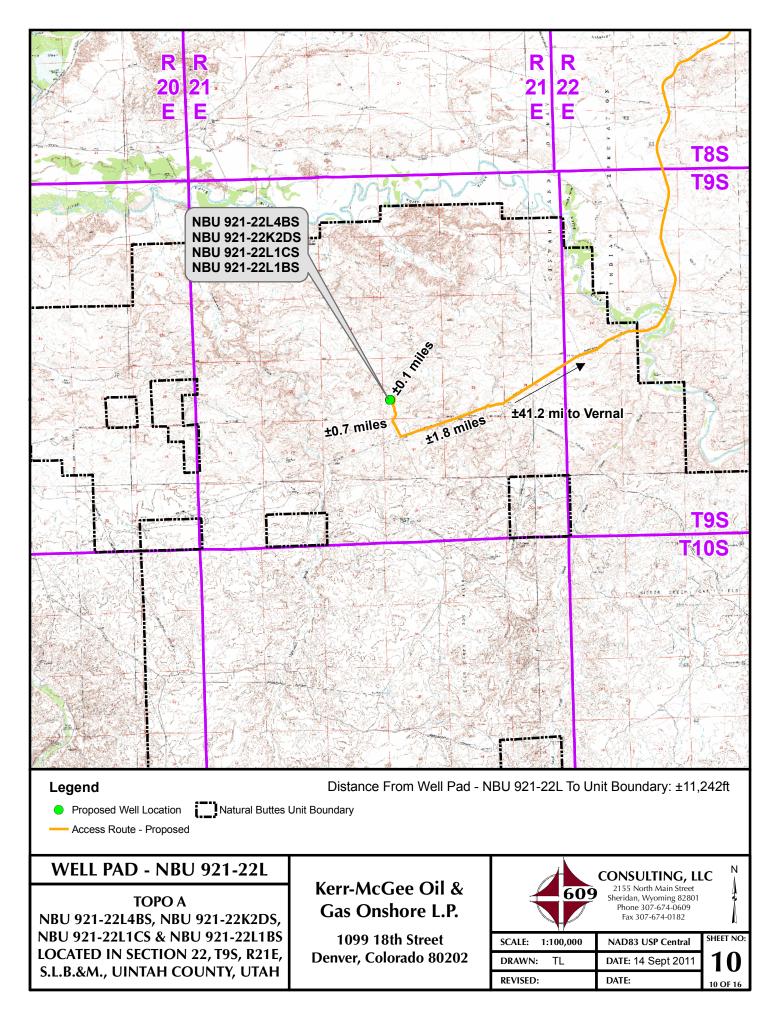
## WELL PAD - NBU 921-22L

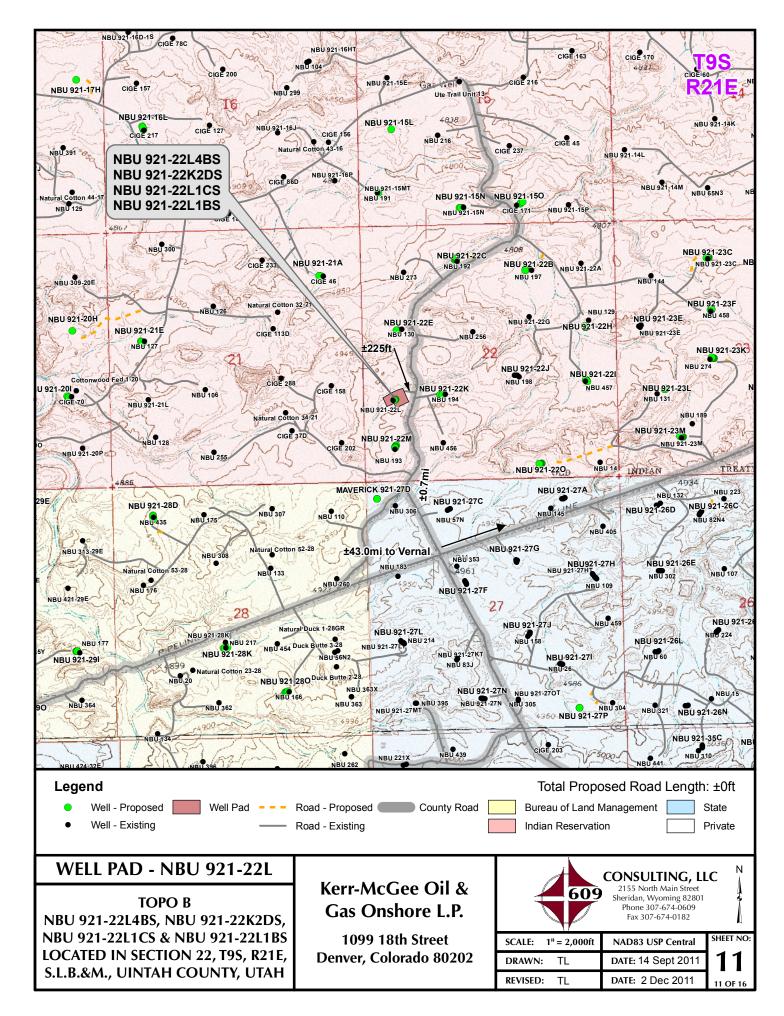
LOCATION PHOTOS
NBU 921-22L4BS, NBU 921-22K2DS,
NBU 921-22L1CS & NBU 921-22L1BS,
LOCATED IN SECTION 22, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.

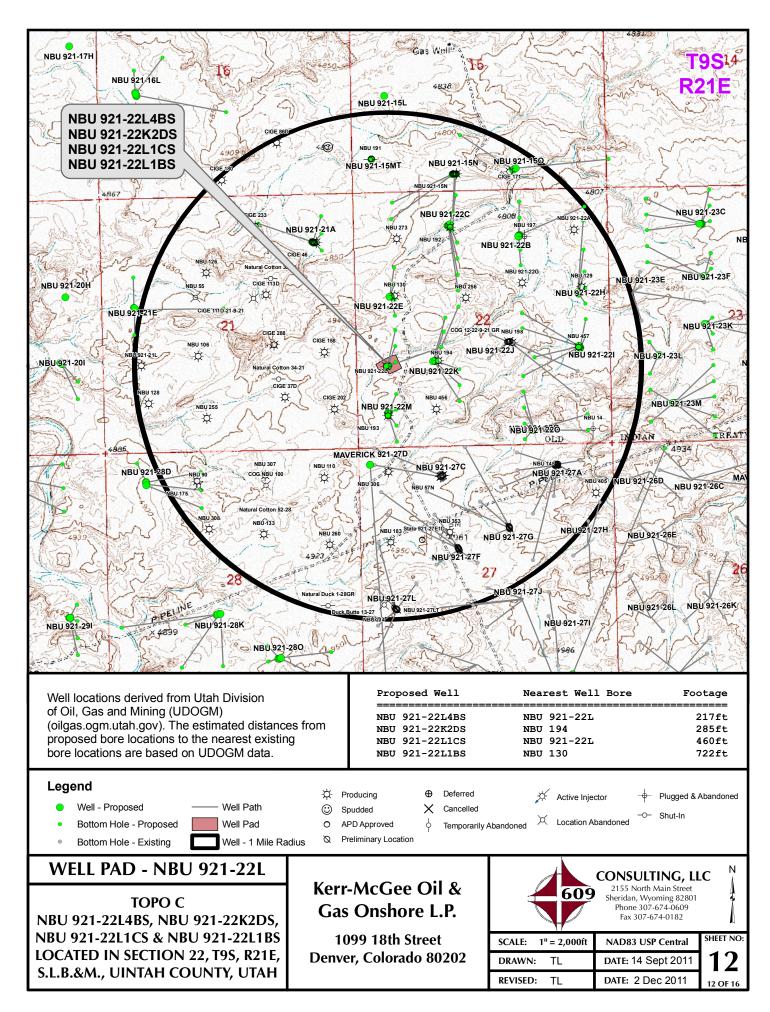


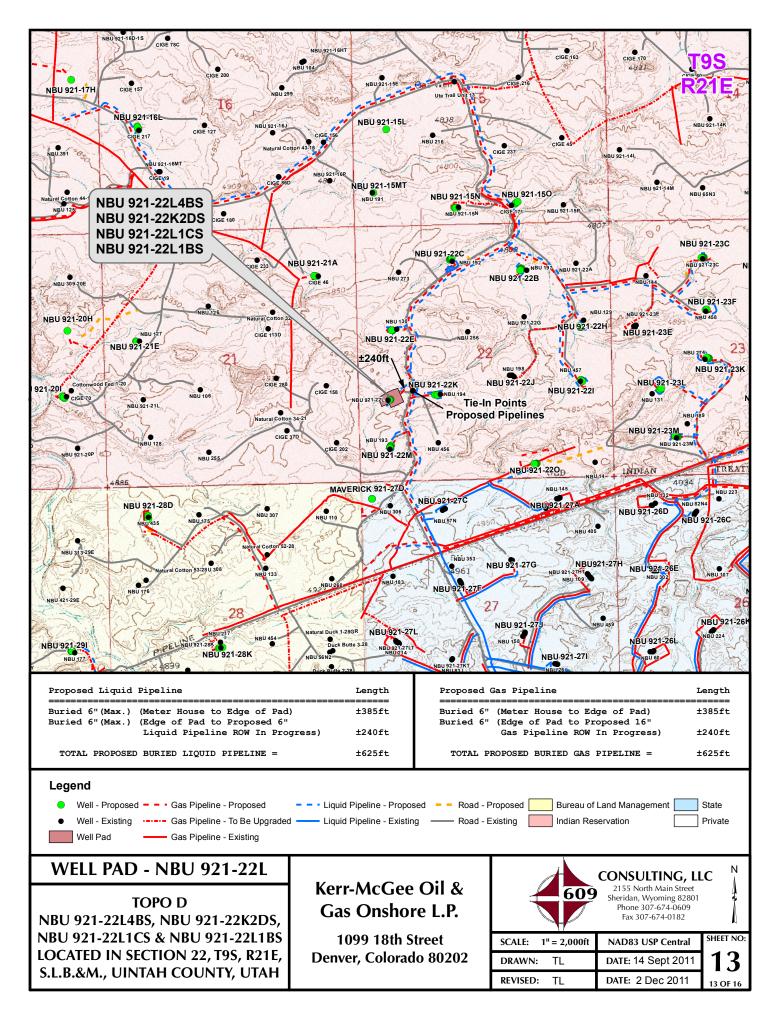
## CONSULTING, LLC 2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

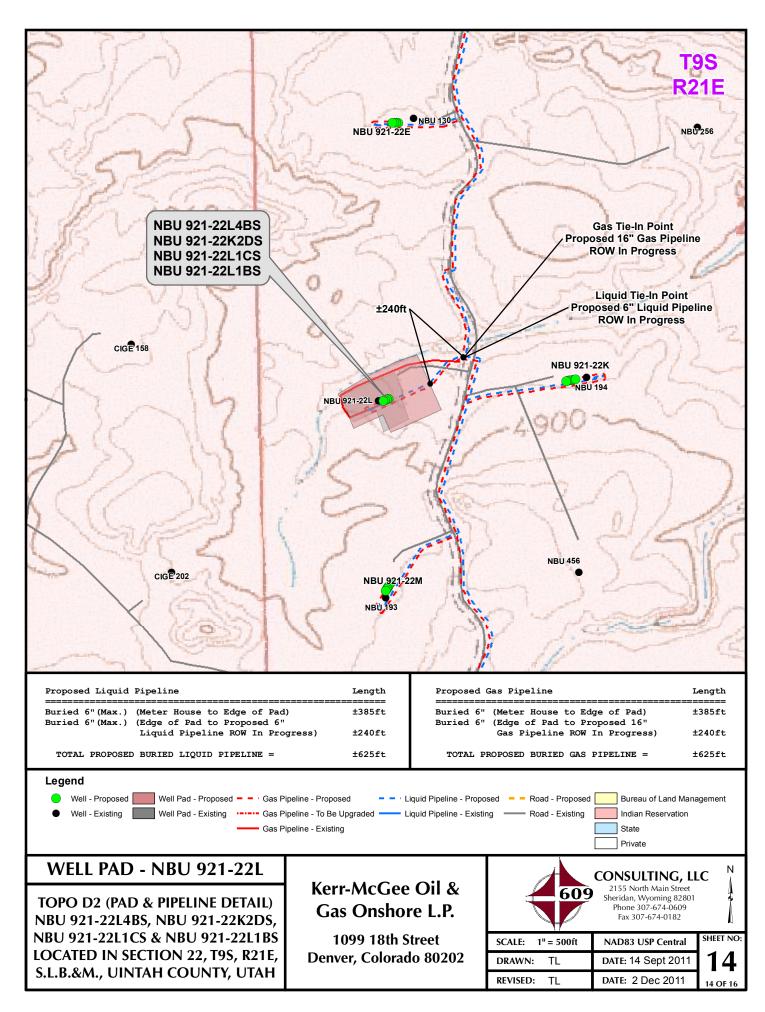
TIMBERLIN	<b>JE</b> (4	35) 789-1365
	& LAND SURVEYING West - vernal, utah 84	,
DATE PHOTOS TAKEN: 7-19-11	PHOTOS TAKEN BY: W.W.	SHEET NO:
DATE DRAWN: 8-29-11	DRAWN BY: T.J.R.	9
Date Last Revised:		9 OF 16

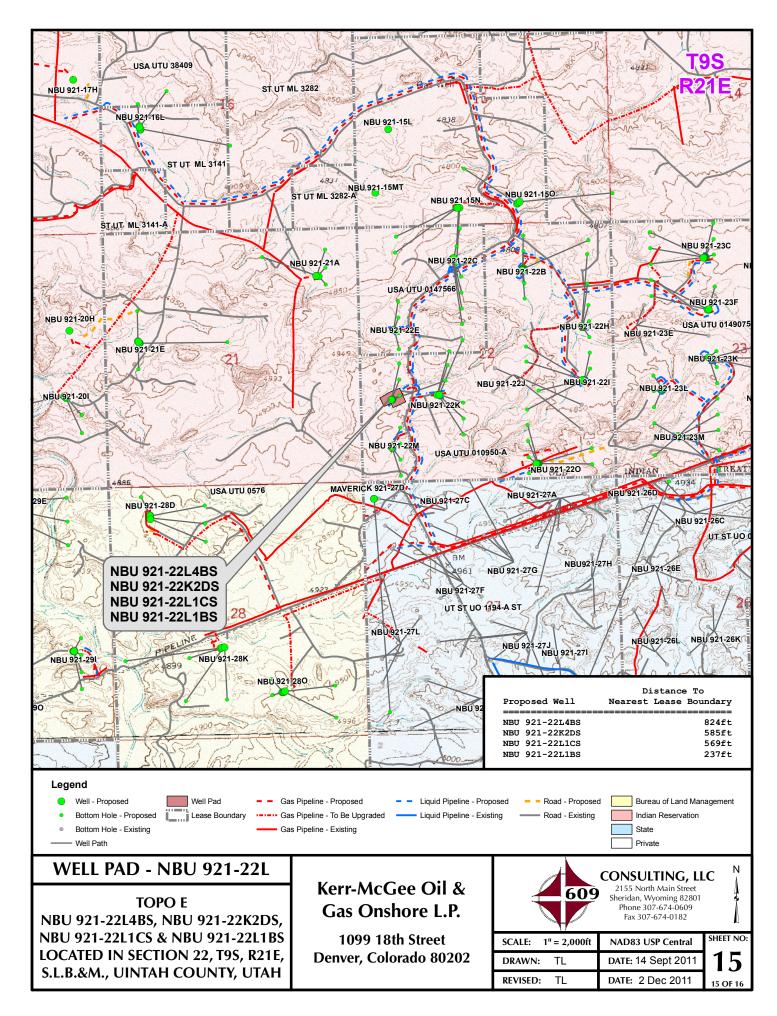












## Kerr-McGee Oil & Gas Onshore, LP WELL PAD - NBU 921-22L WELLS - NBU 921-22L4BS, NBU 921-22K2DS, NBU 921-22L1CS & NBU 921-22L1BS Section 22, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 1.8 miles to a second Class D County Road to the north. Exit right and proceed in a northerly direction along the second Class D County Road approximately 0.7 miles to a service road to the west. Exit left and proceed in a westerly direction along the service road approximately 225 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 43.6 miles in a southerly direction.

SHEET 16 OF 16

API Well Number: 43047 5 20 5 20 5 CONTAG - UTM (feet), NAD27, Zone 12N

Scientific Drilling

11121.00

0

750

1500

Vertical Section at 64.28° (1500 ft/in)

2250

3000

3750

11250

-750

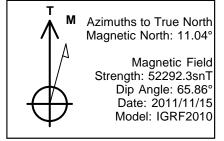
Site: NBU 921-22L PAD Well: NBU 921-22L4B\$

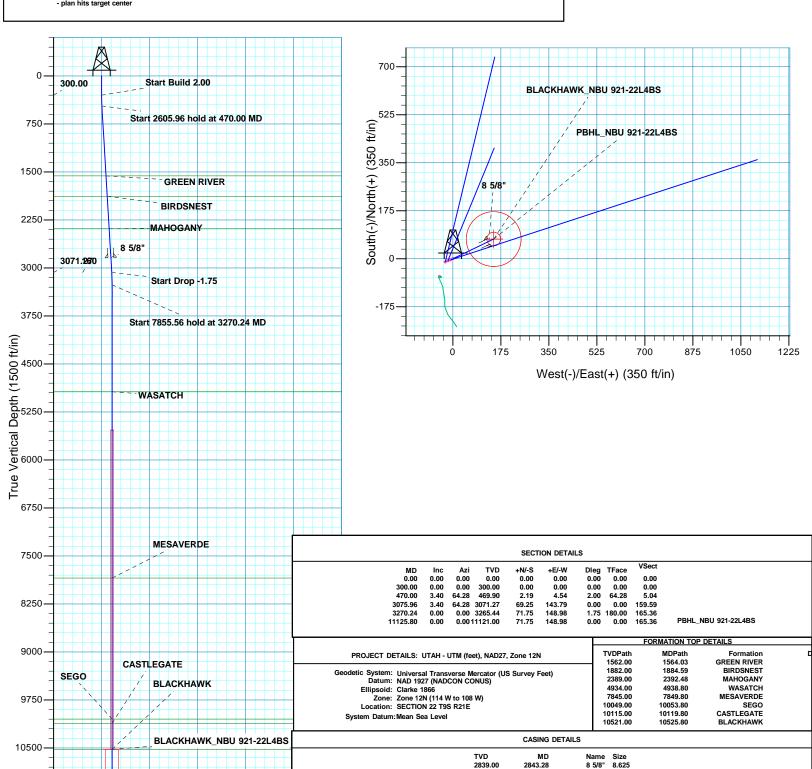
Wellbore: OH

Design: PLAN #1 PRELIMINARY











## **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-22L PAD NBU 921-22L4BS

OH

Plan: PLAN #1 PRELIMINARY

# **Standard Planning Report**

15 November, 2011



RECEIVED: April 25, 2012



## SDI Planning Report



EDM5000-RobertS-Local Database:

Company: US ROCKIES REGION PLANNING Project: UTAH - UTM (feet), NAD27, Zone 12N

NBU 921-22L PAD Site: Well: NBU 921-22L4BS

Wellbore: ОН

PLAN #1 PRELIMINARY Design:

**Local Co-ordinate Reference:** 

**TVD Reference:** MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-22L4BS

GL 4882 & KB 4 @ 4886.00ft (ASSUMED) GL 4882 & KB 4 @ 4886.00ft (ASSUMED)

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS) Geo Datum: Zone 12N (114 W to 108 W) Map Zone:

Mean Sea Level

NBU 921-22L PAD, SECTION 22 T9S R21E Site

Northing: 14,536,264.59 usft Site Position: Latitude: 40° 1' 8.123 N From: Lat/Long Easting: 2,047,986.23 usft Longitude: 109° 32' 39.563 W **Position Uncertainty:** 

System Datum:

0.00 ft Slot Radius: **Grid Convergence:** 0.94 13.200 in

Well NBU 921-22L4BS, 1672 FSL 675 FWL

**Well Position** +N/-S 11.65 ft 14,536,276.69 usft Latitude: 40° 1' 8.238 N Northing: +E/-W 27.44 ft Easting: 2,048,013.48 usft Longitude: 109° 32' 39.210 W

**Position Uncertainty** 0.00 ft Wellhead Elevation: **Ground Level:** 4,882.00 ft

Wellbore ОН Field Strength Magnetics **Model Name** Sample Date Declination Dip Angle (nT) (°) (°) IGRF2010 2011/11/15 11.04 65.86 52.292

PLAN #1 PRELIMINARY Design Audit Notes: Version: Phase: PLAN Tie On Depth: 0.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 64.28

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
470.00	3.40	64.28	469.90	2.19	4.54	2.00	2.00	0.00	64.28	
3,075.96	3.40	64.28	3,071.27	69.25	143.79	0.00	0.00	0.00	0.00	
3,270.24	0.00	0.00	3,265.44	71.75	148.98	1.75	-1.75	0.00	180.00	
11,125.80	0.00	0.00	11,121.00	71.75	148.98	0.00	0.00	0.00	0.00 PE	HL_NBU 921-22L



# **SDI**Planning Report



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-22L PAD

 Well:
 NBU 921-22L4BS

Wellbore: OH

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well NBU 921-22L4BS

GL 4882 & KB 4 @ 4886.00ft (ASSUMED) GL 4882 & KB 4 @ 4886.00ft (ASSUMED)

True

ned Survey									
·									_
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2									
400.00	2.00	64.28	399.98	0.76	1.57	1.75	2.00	2.00	0.00
470.00	3.40	64.28	469.90	2.19	4.54	5.04	2.00	2.00	0.00
			409.90	2.19	4.54	5.04	2.00	2.00	0.00
	6 hold at 470.00		400.05	0.00	0.45	0.00	0.00	0.00	0.00
500.00	3.40	64.28	499.85	2.96	6.15	6.82	0.00	0.00	0.00
600.00	3.40	64.28	599.67	5.53	11.49	12.75	0.00	0.00	0.00
700.00	3.40	64.28	699.50	8.11	16.83	18.68	0.00	0.00	0.00
800.00	3.40	64.28	799.32	10.68	22.18	24.61	0.00	0.00	0.00
900.00	3.40	64.28	899.14	13.25	27.52	30.54	0.00	0.00	0.00
1,000.00	3.40	64.28	998.97	15.83	32.86	36.47	0.00	0.00	0.00
1,100.00	3.40	64.28	1,098.79	18.40	38.21	42.41	0.00	0.00	0.00
1,200.00	3.40	64.28	1,198.62	20.97	43.55	48.34	0.00	0.00	0.00
1,300.00	3.40	64.28	1,298.44	23.55	48.89	54.27	0.00	0.00	0.00
1,400.00	3.40	64.28	1,398.26	26.12	54.24	60.20	0.00	0.00	0.00
1,500.00	3.40	64.28	1,498.09	28.69	59.58	66.13	0.00	0.00	0.00
1,564.03	3.40	64.28	1,562.00	30.34	63.00	69.93	0.00	0.00	0.00
GREEN RIV	ER								
1,600.00	3.40	64.28	1,597.91	31.27	64.92	72.06	0.00	0.00	0.00
1,700.00	3.40	64.28	1,697.74	33.84	70.27	77.99	0.00	0.00	0.00
1 900 00	2.40	64.00	1 707 56	36.41	7F 61	83.92	0.00	0.00	0.00
1,800.00 1,884.59	3.40 3.40	64.28 64.28	1,797.56 1,882.00	38.59	75.61 80.13	88.94	0.00 0.00	0.00	0.00
		04.20	1,002.00	30.39	00.13	00.94	0.00	0.00	0.00
BIRDSNEST		04.00	4 007 00	38.99	00.05	89.85	0.00	0.00	0.00
1,900.00	3.40	64.28	1,897.38		80.95		0.00	0.00	0.00
2,000.00	3.40	64.28	1,997.21	41.56	86.29	95.78	0.00		
2,100.00	3.40	64.28	2,097.03	44.13	91.64	101.71	0.00	0.00	0.00
2,200.00	3.40	64.28	2,196.86	46.71	96.98	107.64	0.00	0.00	0.00
2,300.00	3.40	64.28	2,296.68	49.28	102.32	113.57	0.00	0.00	0.00
2,392.48	3.40	64.28	2,389.00	51.66	107.27	119.06	0.00	0.00	0.00
MAHOGAN	1								
2,400.00	3.40	64.28	2,396.50	51.85	107.67	119.50	0.00	0.00	0.00
2,500.00	3.40	64.28	2,496.33	54.43	113.01	125.43	0.00	0.00	0.00
2,600.00	3.40	64.28	2,596.15	57.00	118.35	131.37	0.00	0.00	0.00
2,700.00	3.40	64.28	2,695.98	59.57	123.70	137.30	0.00	0.00	0.00
2,800.00	3.40	64.28	2,795.80	62.15	129.04	143.23	0.00	0.00	0.00
2,843.28	3.40	64.28	2,839.00	63.26	131.35	145.79	0.00	0.00	0.00
8 5/8"									
2,900.00	3.40	64.28	2,895.62	64.72	134.38	149.16	0.00	0.00	0.00
3.000.00	3.40	64.28	2,995.45	67.29	139.73	155.09	0.00	0.00	0.00
3,000.00	3.40 3.40	64.28	2,995.45 3,071.27	67.29 69.25	139.73	155.09	0.00	0.00	0.00
		04.20	3,011.21	09.20	143.18	138.38	0.00	0.00	0.00
Start Drop -		64.00	2 005 00	60.00	144.00	160.00	4 75	4 75	0.00
3,100.00	2.98	64.28	3,095.28	69.83	144.99	160.93	1.75	-1.75	0.00
3,200.00	1.23	64.28	3,195.20	71.42 71.75	148.30	164.60 165.36	1.75 1.75	-1.75 1.75	0.00
3,270.24	0.00	0.00	3,265.44	71.75	148.98	103.30	1.75	-1.75	0.00
Start 7855.5	6 hold at 3270.24	+ IVID							
3,300.00	0.00	0.00	3,295.20	71.75	148.98	165.36	0.00	0.00	0.00
3,400.00	0.00	0.00	3,395.20	71.75	148.98	165.36	0.00	0.00	0.00
3,500.00	0.00	0.00	3,495.20	71.75	148.98	165.36	0.00	0.00	0.00
3,600.00	0.00	0.00	3,595.20	71.75	148.98	165.36	0.00	0.00	0.00
3,700.00	0.00	0.00	3,695.20	71.75	148.98	165.36	0.00	0.00	0.00



# **SDI**Planning Report



Database: EDM5000-RobertS-Local Company: US ROCKIES REGION P

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Project:
 UTAH - UTM (feet),

 Site:
 NBU 921-22L PAD

 Well:
 NBU 921-22L4BS

Wellbore: OH

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well NBU 921-22L4BS

GL 4882 & KB 4 @ 4886.00ft (ASSUMED) GL 4882 & KB 4 @ 4886.00ft (ASSUMED)

True

Design:	PLAN #1 PRE	LIMINARY							
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,800.00 3,900.00 4,000.00 4,100.00 4,200.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	3,795.20 3,895.20 3,995.20 4,095.20 4,195.20	71.75 71.75 71.75 71.75 71.75	148.98 148.98 148.98 148.98 148.98	165.36 165.36 165.36 165.36	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
4,300.00	0.00	0.00	4,295.20	71.75	148.98	165.36	0.00	0.00	0.00
4,400.00	0.00	0.00	4,395.20	71.75	148.98	165.36	0.00	0.00	0.00
4,500.00	0.00	0.00	4,495.20	71.75	148.98	165.36	0.00	0.00	0.00
4,600.00	0.00	0.00	4,595.20	71.75	148.98	165.36	0.00	0.00	0.00
4,700.00	0.00	0.00	4,695.20	71.75	148.98	165.36	0.00	0.00	0.00
4,800.00	0.00	0.00	4,795.20	71.75	148.98	165.36	0.00	0.00	0.00
4,900.00	0.00	0.00	4,895.20	71.75	148.98	165.36	0.00	0.00	0.00
4,938.80	0.00	0.00	4,934.00	71.75	148.98	165.36	0.00	0.00	0.00
5,000.00	0.00	0.00	4,995.20	71.75	148.98	165.36	0.00	0.00	0.00
5,100.00	0.00	0.00	5,095.20	71.75	148.98	165.36	0.00	0.00	0.00
5,200.00	0.00	0.00	5,195.20	71.75	148.98	165.36	0.00	0.00	0.00
5,300.00	0.00	0.00	5,295.20	71.75	148.98	165.36	0.00	0.00	0.00
5,400.00	0.00	0.00	5,395.20	71.75	148.98	165.36	0.00	0.00	0.00
5,500.00	0.00	0.00	5,495.20	71.75	148.98	165.36	0.00	0.00	0.00
5,600.00	0.00	0.00	5,595.20	71.75	148.98	165.36	0.00	0.00	0.00
5,700.00	0.00	0.00	5,695.20	71.75	148.98	165.36	0.00	0.00	0.00
5,800.00	0.00	0.00	5,795.20	71.75	148.98	165.36	0.00	0.00	0.00
5,900.00	0.00	0.00	5,895.20	71.75	148.98	165.36	0.00	0.00	0.00
6,000.00	0.00	0.00	5,995.20	71.75	148.98	165.36	0.00	0.00	0.00
6,100.00	0.00	0.00	6,095.20	71.75	148.98	165.36	0.00	0.00	0.00
6,200.00	0.00	0.00	6,195.20	71.75	148.98	165.36	0.00	0.00	0.00
6,300.00	0.00	0.00	6,295.20	71.75	148.98	165.36	0.00	0.00	0.00
6,400.00	0.00	0.00	6,395.20	71.75	148.98	165.36	0.00	0.00	0.00
6,500.00	0.00	0.00	6,495.20	71.75	148.98	165.36	0.00	0.00	0.00
6,600.00	0.00	0.00	6,595.20	71.75	148.98	165.36	0.00	0.00	0.00
6,700.00	0.00	0.00	6,695.20	71.75	148.98	165.36	0.00	0.00	0.00
6,800.00	0.00	0.00	6,795.20	71.75	148.98	165.36	0.00	0.00	0.00
6,900.00	0.00	0.00	6,895.20	71.75	148.98	165.36	0.00	0.00	0.00
7,000.00	0.00	0.00	6,995.20	71.75	148.98	165.36	0.00	0.00	0.00
7,100.00	0.00	0.00	7,095.20	71.75	148.98	165.36	0.00	0.00	0.00
7,200.00	0.00	0.00	7,195.20	71.75	148.98	165.36	0.00	0.00	0.00
7,300.00	0.00	0.00	7,295.20	71.75	148.98	165.36	0.00	0.00	0.00
7,400.00	0.00	0.00	7,395.20	71.75	148.98	165.36	0.00	0.00	0.00
7,500.00	0.00	0.00	7,495.20	71.75	148.98	165.36	0.00	0.00	0.00
7,600.00	0.00	0.00	7,595.20	71.75	148.98	165.36	0.00	0.00	0.00
7,700.00 7,800.00 7,849.80 <b>MESAVERDE</b>	0.00 0.00 0.00	0.00 0.00 0.00	7,695.20 7,795.20 7,845.00	71.75 71.75 71.75	148.98 148.98 148.98	165.36 165.36 165.36	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
7,900.00	0.00	0.00	7,895.20	71.75	148.98	165.36	0.00	0.00	0.00
8,000.00	0.00	0.00	7,995.20	71.75	148.98	165.36	0.00	0.00	0.00
8,100.00	0.00	0.00	8,095.20	71.75	148.98	165.36	0.00	0.00	0.00
8,200.00	0.00	0.00	8,195.20	71.75	148.98	165.36	0.00	0.00	0.00
8,300.00	0.00	0.00	8,295.20	71.75	148.98	165.36	0.00	0.00	0.00
8,400.00	0.00	0.00	8,395.20	71.75	148.98	165.36	0.00	0.00	0.00
8,500.00	0.00	0.00	8,495.20	71.75	148.98	165.36	0.00	0.00	0.00
8,600.00	0.00	0.00	8,595.20	71.75	148.98	165.36	0.00	0.00	0.00
8,700.00	0.00	0.00	8,695.20	71.75	148.98	165.36	0.00	0.00	0.00



## **SDI** Planning Report



Database: Company: Project: EDM5000-RobertS-Local

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-22L PAD

 Well:
 NBU 921-22L4BS

Wellbore: OH

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-22L4BS

GL 4882 & KB 4 @ 4886.00ft (ASSUMED) GL 4882 & KB 4 @ 4886.00ft (ASSUMED)

True

		LIMINARY							
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,795.20	71.75	148.98	165.36	0.00	0.00	0.00
8,900.00	0.00	0.00	8,895.20	71.75	148.98	165.36	0.00	0.00	0.00
9,000.00	0.00	0.00	8,995.20	71.75	148.98	165.36	0.00	0.00	0.00
9,100.00	0.00	0.00	9,095.20	71.75	148.98	165.36	0.00	0.00	0.00
9,200.00	0.00	0.00	9,195.20	71.75	148.98	165.36	0.00	0.00	0.00
9,300.00	0.00	0.00	9,295.20	71.75	148.98	165.36	0.00	0.00	0.00
9,400.00	0.00	0.00	9,395.20	71.75	148.98	165.36	0.00	0.00	0.00
9,500.00	0.00	0.00	9,495.20	71.75	148.98	165.36	0.00	0.00	0.00
9,600.00	0.00	0.00	9,595.20	71.75	148.98	165.36	0.00	0.00	0.00
9,700.00	0.00	0.00	9,695.20	71.75	148.98	165.36	0.00	0.00	0.00
9,800.00	0.00	0.00	9,795.20	71.75	148.98	165.36	0.00	0.00	0.00
9,900.00	0.00	0.00	9,895.20	71.75	148.98	165.36	0.00	0.00	0.00
10,000.00	0.00	0.00	9,995.20	71.75	148.98	165.36	0.00	0.00	0.00
10,053.80 <b>SEGO</b>	0.00	0.00	10,049.00	71.75	148.98	165.36	0.00	0.00	0.00
10,100.00	0.00	0.00	10,095.20	71.75	148.98	165.36	0.00	0.00	0.00
10,119.80	0.00	0.00	10,115.00	71.75	148.98	165.36	0.00	0.00	0.00
10,200.00	0.00	0.00	10,195.20	71.75	148.98	165.36	0.00	0.00	0.00
10,300.00	0.00	0.00	10,295.20	71.75	148.98	165.36	0.00	0.00	0.00
10,400.00	0.00	0.00	10,395.20	71.75	148.98	165.36	0.00	0.00	0.00
10,500.00	0.00	0.00	10,495.20	71.75	148.98	165.36	0.00	0.00	0.00
10,525.80	0.00	0.00	10,521.00	71.75	148.98	165.36	0.00	0.00	0.00
	K - BLACKHAW								
10,600.00	0.00	0.00	10,595.20	71.75	148.98	165.36	0.00	0.00	0.00
10,700.00	0.00	0.00	10,695.20	71.75	148.98	165.36	0.00	0.00	0.00
10,800.00	0.00	0.00	10,795.20	71.75	148.98	165.36	0.00	0.00	0.00
10,900.00	0.00	0.00	10,895.20	71.75	148.98	165.36	0.00	0.00	0.00
11,000.00	0.00	0.00	10,995.20	71.75	148.98	165.36	0.00	0.00	0.00
11,100.00	0.00	0.00	11,095.20	71.75	148.98	165.36	0.00	0.00	0.00
11,125.80	0.00	0.00	11,121.00	71.75	148.98	165.36	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BLACKHAWK_NBU 921 - plan hits target cent - Circle (radius 25.00		0.00	10,521.00	71.75	148.98	14,536,350.86	2,048,161.26	40° 1' 8.947 N	109° 32' 37.295 W
PBHL_NBU 921-22L4B\$ - plan hits target cent - Circle (radius 100.0		0.00	11,121.00	71.75	148.98	14,536,350.86	2,048,161.26	40° 1' 8.947 N	109° 32' 37.295 W

Casing Points						
	Measured Depth	Vertical Depth		Casing Diameter	r	Hole Diameter
	(ft)	(ft)	Na	me (in)		(in)
	2,843.28	2,839.00	8 5/8"	8.6	325	11.000



## SDI **Planning Report**



Database: Company: EDM5000-RobertS-Local

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

Project: NBU 921-22L PAD Site: Well: NBU 921-22L4BS

Wellbore: ОН

Design: PLAN #1 PRELIMINARY Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-22L4BS

GL 4882 & KB 4 @ 4886.00ft (ASSUMED) GL 4882 & KB 4 @ 4886.00ft (ASSUMED)

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,564.03	1,562.00	GREEN RIVER				
	1,884.59	1,882.00	BIRDSNEST				
	2,392.48	2,389.00	MAHOGANY				
	4,938.80	4,934.00	WASATCH				
	7,849.80	7,845.00	MESAVERDE				
	10,053.80	10,049.00	SEGO				
	10,119.80	10,115.00	CASTLEGATE				
	10,525.80	10,521.00	BLACKHAWK				

Plan Annotations										
Measured	Vertical	Local Coor	dinates							
Depth	Depth	+N/-S	+E/-W							
(ft)	(ft)	(ft)	(ft)	Comment						
300.00	300.00	0.00	0.00	Start Build 2.00						
470.00	469.90	2.19	4.54	Start 2605.96 hold at 470.00 MD						
3,075.96	3,071.27	69.25	143.79	Start Drop -1.75						
3,270.24	3,265.44	71.75	148.98	Start 7855.56 hold at 3270.24 MD						
11,125.80	11,121.00	71.75	148.98	TD at 11125.80						

NBU 921-22K2DS/ 921-22L1BS/ 921-22L1CS/ 921-22L4BS Kerr-McGee Oil Gas Onshore. L.P.

NBU 921-22L Pad Surface Use Plan of Operations 1 of 12

## Kerr-McGee Oil & Gas Onshore, L.P.

## NBU 921-22L Pad

<u>API #</u>	ļ	NBU 921-22K2DS		
	Surface:	1668 FSL / 666 FWL	NWSW	Lot
	BHL:	2038 FSL / 1784 FWL	NESW	Lot
<u>API #</u>	1	NBU 921-22L1BS		
	Surface:	1660 FSL / 648 FWL	NWSW	Lot
	BHL:	2408 FSL / 824 FWL	NWSW	Lot
<u>API #</u>	<u> </u>	NBU 921-22L1CS		
	Surface:	1664 FSL / 657 FWL	NWSW	Lot
	BHL:	2076 FSL / 824 FWL	NWSW	Lot
<u>API #</u>	<u>_</u>	NBU 921-22L4BS		
	Surface:	1672 FSL / 675 FWL	NWSW	Lot
	BHL:	1744 FSL / 824 FWL	NWSW	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on October 3-4, 2011. Present were:

- .
- Bucky Secakuku (10/4/2011 only) BIA;
- · LeAllen Blackhair, Rainey Longhair Ute Indian Tribe;
- · Kelly Jo Jackson Montgomery Archeological Consultants Inc.;
- Scott Carson Smiling Lake Consulting;
- · John Slaugh, Mitch Batty Timberline Engineering & Land Surveying, Inc.;
- · Laura Abrams, Charles Chase, Raleen White, Doyle Holmes, Lovel Young, Sheila Wopsock Kerr-McGee

## A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

NBU 921-22K2DS/ 921-22L1BS/ 921-22L1CS/ 921-22L4BS Kerr-McGee Oil Gas Onshore. L.P.

NBU 921-22L Pad Surface Use Plan of Operations 2 of 12

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

## B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BIA.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

NBU 921-22K2DS/ 921-22L1BS/ 921-22L1CS/ 921-22L4BS Kerr-McGee Oil Gas Onshore. L.P.

NBU 921-22L Pad Surface Use Plan of Operations 3 of 12

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

No new access road is proposed for this well pad - See Topo B.

## C. Location of Existing Wells:

A) Refer to Topo Map C.

## D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 921-22L, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on November 7, 2011. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

## **GAS GATHERING**

Please refer to Topo D2- Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is  $\pm 625$ ° and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

±625' (0.1 miles) – Section 22 T9S R21E (SW/4) – On-lease UTU010950A Ute Indian Tribe surface, New 6" buried gas gathering pipeline from the meter to the proposed 16" gas pipleine- ROW in progress. Please refer to Topo D2 - Pad and Pipeline Detail.

## **LIQUID GATHERING**

Please refer to Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 625$ ' and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

±625' (0.1 miles) – Section 22 T9S R21E (SW/4) – On-lease UTU010950A Ute Indian Tribe surface, New 6" buried liquid gathering pipeline from the separator to the proposed 6" liquid pipeline- ROW in progress. Please refer to Topo D2 - Pad and Pipeline Detail.

RECEIVED: April 25, 2012

NBU 921-22K2DS/ 921-22L1BS/ 921-22L1CS/ 921-22L4BS Kerr-McGee Oil Gas Onshore. L.P.

NBU 921-22L Pad Surface Use Plan of Operations 4 of 12

## **Pipeline Gathering Construction**

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

NBU 921-22K2DS/ 921-22L1BS/ 921-22L1CS/ 921-22L4BS Kerr-McGee Oil Gas Onshore. L.P.

NBU 921-22L Pad Surface Use Plan of Operations 5 of 12

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the Vernal BIA Office before terminating of the use of the pipeline(s).

## The Anadarko Completions Transportation System (ACTS) information:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The temporary ACTS lines will be permitted under a separate cover to the Ute Indian Tribe.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BIA considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BIA.

NBU 921-22K2DS/ 921-22L1BS/ 921-22L1CS/ 921-22L4BS Kerr-McGee Oil Gas Onshore. L.P.

NBU 921-22L Pad Surface Use Plan of Operations 6 of 12

#### E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from Tribal lands without prior approval from the BIA. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BIA.

#### G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BIA, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BIA, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc.). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BIA. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BIA.

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Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

#### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

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Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 34 T9S R21E

#### H. Ancillary Facilities:

ancillary facilities are

#### I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BIA.

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#### J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

#### **Interim Reclamation**

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BIA for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

#### **Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BIA will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BIA/Tribe. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications as proposed below in "Measures Common to Interim and Final Reclamation".

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BIA/Tribe.

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#### **Measures Common to Interim and Final Reclamation**

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box" in order to seed "fluffy" seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BIA/Tribe or a specific seed mix will be proposed by Kerr-McGee to the BIA/Tribe and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed".

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Indian Ricegrass (Nezpar)	3
Sandberg Bluegrass	0.75
Bottlebrush Squirreltail	1
Great Basin Wildrye	0.5
Crested Wheatgrass	1.5
Winterfat	0.25
Shadscale	1.5
Four-wing Saltbrush	0.75
Forage Kochia	0.25
Total	9.5

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

#### Weed Control

Noxious weeds will be controlled in akk orihect areas un accordance with all applicable rules and regulations.

#### K. Surface/Mineral Ownership:

Ute Indian Tribe
P.O. Box 70
988 South 7500 East Annex Building
Fort Duschesne, UT 84026
(435) 722-4307

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435) 781-4400 NBU 921-22K2DS/ 921-22L1BS/ 921-22L1CS/ 921-22L4BS Kerr-McGee Oil Gas Onshore. L.P.

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#### L. Other Information:

#### **Onsite Specifics:**

- Round corner #11
- Arch, Paleo and Energy and Minerals monitoring during construction.
- Move stockpile from south side of pit around to corners 7, 8 & 9 to stay off rock formation.
- Armor entire north side of pad with Rip Rap.

#### **Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BIA.

#### **Resource Reports:**

A Class I literature survey was completed in December, 2011 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-406.

A paleontological reconnaissance survey was completed on August 12, 2010 by SWCA Environmental Consultants. For additional details please refer to report UT11-14314-120.

Biological field survey was completed on August 8 and 16, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-571.

#### **Proposed Action Annual Emissions Tables:**

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>							
Pollutant	Development	Production	Total				
NOx	3.8	0.12	3.92				
CO	2.2	0.11	2.31				
VOC	0.1	4.9	5				
$SO_2$	0.005	0.0043	0.0093				
$PM_{10}$	1.7	0.11	1.81				
PM <sub>2.5</sub>	0.4	0.025	0.425				
Benzene	2.2E-03	0.044	0.046				
Toluene	1.6E-03	0.103	0.105				
Ethylbenzene	3.4E-04	0.005	0.005				
Xylene	1.1E-03	0.076	0.077				
n-Hexane	1.7E-04	0.145	0.145				
Formaldehyde	1.3E-02	8.64E-05	1.31E-02				

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison						
Species	Proposed Action Production Emissions (ton/yr)	2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr)	Percentage of Proposed Action to WRAP Phase III			
NOx	15.68	16,547	0.09%			
VOC	20	127,495	0.02%			

a http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html

Uintah Basin Data

NBU 921-22K2DS/ 921-22L1BS/ 921-22L1CS/ 921-22L4BS Kerr-McGee Oil Gas Onshore, L.P.

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#### M. Lessee's or Operators' Representative & Certification:

Laura Abrams Regulatory Analyst II Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6356 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Laura Abrams

December 21, 2011

Date



Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

October 10, 2011

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 921-22L4BS

T9S-R21E

Section 22 NWSW (Surface and Bottom Hole)

Surface: 1672' FSL, 675' FWL Bottom Hole: 1744' FSL, 824' FWL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-22L4BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

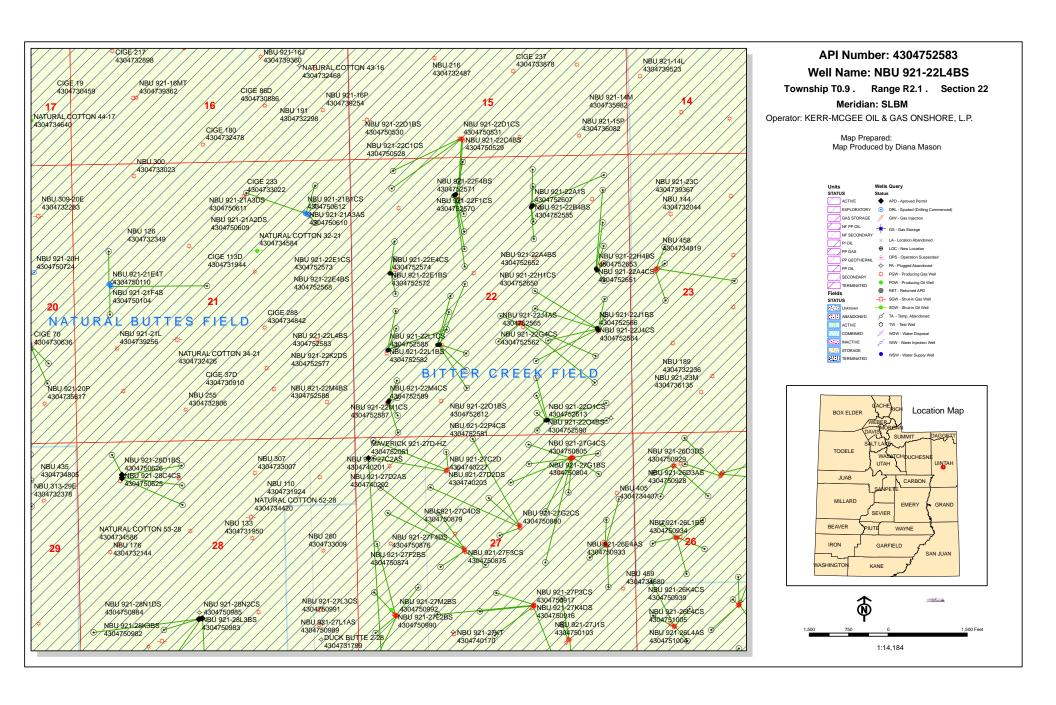
Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney Sr. Staff Landman

Joe Matiney



# United States Department of the Interior

#### BUREAU OF LAND MANAGEMENT

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

May 14, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Natural Buttes Unit, Uintah County, Utah.

BHL Sec 22 T09S R21E 0579 FNL 1819 FEL

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

WELL PAD - NBU 921-22K 43-047-52550 NBU 921-22K2AS Sec 22 T09S R21E 1748 FSL 1611 FWL BHL Sec 22 T09S R21E 2366 FSL 1832 FWL 43-047-52551 NBU 921-22K4CS Sec 22 T09S R21E 1753 FSL 1640 FWL BHL Sec 22 T09S R21E 1576 FSL 2147 FWL 43-047-52552 NBU 921-22N1BS Sec 22 T09S R21E 1751 FSL 1630 FWL BHL Sec 22 T09S R21E 1244 FSL 2147 FWL 43-047-52575 NBU 921-22F4CS Sec 22 T09S R21E 1755 FSL 1650 FWL BHL Sec 22 T09S R21E 2406 FNL 2148 FWL 43-047-52576 NBU 921-22F3DS Sec 22 T09S R21E 1747 FSL 1601 FWL BHL Sec 22 T09S R21E 2634 FNL 1870 FWL 43-047-52580 NBU 921-22N1CS Sec 22 T09S R21E 1750 FSL 1620 FWL BHL Sec 22 T09S R21E 0912 FSL 2146 FWL WELL PAD - NBU 921-22B 43-047-52553 NBU 921-22G1CS Sec 22 T09S R21E 0973 FNL 1861 FEL BHL Sec 22 T09S R21E 1574 FNL 1818 FEL 43-047-52554 NBU 921-22B4CS Sec 22 T09S R21E 0965 FNL 1854 FEL BHL Sec 22 T09S R21E 1243 FNL 1819 FEL 43-047-52555 NBU 921-22B4BS Sec 22 T09S R21E 0935 FNL 1828 FEL BHL Sec 22 T09S R21E 0911 FNL 1819 FEL 43-047-52556 NBU 921-22B1CS Sec 22 T09S R21E 0950 FNL 1841 FEL

RECEIVED: May 15, 2012

Page 2 API # WELL NAME LOCATION (Proposed PZ WASATCH-MESA VERDE) 43-047-52557 NBU 921-22B1BS Sec 22 T09S R21E 0958 FNL 1848 FEL BHL Sec 22 T09S R21E 0249 FNL 1819 FEL 43-047-52607 NBU 921-22A1S Sec 22 T09S R21E 0943 FNL 1835 FEL BHL Sec 22 T09S R21E 0386 FNL 0464 FEL WELL PAD - NBU 921-22C 43-047-52558 NBU 921-22C1BS Sec 22 T09S R21E 0691 FNL 2010 FWL BHL Sec 22 T09S R21E 0085 FNL 2150 FWL 43-047-52567 NBU 921-22C4CS Sec 22 T09S R21E 0696 FNL 2001 FWL BHL Sec 22 T09S R21E 1078 FNL 2149 FWL 43-047-52569 NBU 921-22F1BS Sec 22 T09S R21E 0701 FNL 1993 FWL BHL Sec 22 T09S R21E 1410 FNL 2149 FWL

43-047-52570 NBU 921-22F1CS Sec 22 T09S R21E 0707 FNL 1984 FWL BHL Sec 22 T09S R21E 1742 FNL 2149 FWL

43-047-52571 NBU 921-22F4BS Sec 22 T09S R21E 0712 FNL 1976 FWL

BHL Sec 22 T09S R21E 2073 FNL 2149 FWL

WELL PAD - NBU 921-22I

43-047-52560 NBU 921-22I1CS Sec 22 T09S R21E 1973 FSL 0620 FEL BHL Sec 22 T09S R21E 2237 FSL 0494 FEL

43-047-52561 NBU 921-22I1BS Sec 22 T09S R21E 1981 FSL 0626 FEL BHL Sec 22 T09S R21E 2569 FSL 0494 FEL

43-047-52562 NBU 921-22G4CS Sec 22 T09S R21E 2013 FSL 0650 FEL

BHL Sec 22 T09S R21E 2569 FNL 1818 FEL

43-047-52564 NBU 921-22J4CS Sec 22 T09S R21E 1989 FSL 0632 FEL BHL Sec 22 T09S R21E 1410 FSL 1817 FEL

43-047-52565 NBU 921-22J4AS Sec 22 T09S R21E 1997 FSL 0638 FEL BHL Sec 22 T09S R21E 1796 FSL 1580 FEL

43-047-52566 NBU 921-22J1BS Sec 22 T09S R21E 2005 FSL 0644 FEL BHL Sec 22 T09S R21E 2405 FSL 1817 FEL

WELL PAD - NBU 921-22H

43-047-52563 NBU 921-22H4CS Sec 22 T09S R21E 2196 FNL 0627 FEL BHL Sec 22 T09S R21E 2403 FNL 0494 FEL

43-047-52650 NBU 921-22H1CS Sec 22 T09S R21E 2179 FNL 0637 FEL

BHL Sec 22 T09S R21E 1740 FNL 0494 FEL

43-047-52651 NBU 921-22A4CS Sec 22 T09S R21E 2170 FNL 0642 FEL

BHL Sec 22 T09S R21E 1288 FNL 0504 FEL

43-047-52652 NBU 921-22A4BS Sec 22 T09S R21E 2162 FNL 0647 FEL

BHL Sec 22 T09S R21E 0670 FNL 0494 FEL

43-047-52653 NBU 921-22H4BS Sec 22 T09S R21E 2188 FNL 0632 FEL

BHL Sec 22 T09S R21E 2071 FNL 0494 FEL

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### WELL PAD - NBU 921-22E

43-047-52568 NBU 921-22E4BS Sec 22 T09S R21E 2179 FNL 0750 FWL

BHL Sec 22 T09S R21E 2239 FNL 0824 FWL

43-047-52572 NBU 921-22E1BS Sec 22 T09S R21E 2179 FNL 0720 FWL

BHL Sec 22 T09S R21E 1576 FNL 0824 FWL

43-047-52573 NBU 921-22E1CS Sec 22 T09S R21E 2179 FNL 0730 FWL

BHL Sec 22 T09S R21E 1908 FNL 0824 FWL

43-047-52574 NBU 921-22E4CS Sec 22 T09S R21E 2179 FNL 0740 FWL

BHL Sec 22 T09S R21E 2572 FNL 0824 FWL

#### WELL PAD - NBU 921-22L

43-047-52577 NBU 921-22K2DS Sec 22 T09S R21E 1668 FSL 0666 FWL

BHL Sec 22 T09S R21E 2038 FSL 1784 FWL

43-047-52582 NBU 921-22L1BS Sec 22 T09S R21E 1660 FSL 0648 FWL

BHL Sec 22 T09S R21E 2408 FSL 0824 FWL

43-047-52583 NBU 921-22L4BS Sec 22 T09S R21E 1672 FSL 0675 FWL

BHL Sec 22 T09S R21E 1744 FSL 0824 FWL

43-047-52585 NBU 921-22L1CS Sec 22 T09S R21E 1664 FSL 0657 FWL

BHL Sec 22 T09S R21E 2076 FSL 0824 FWL

#### WELL PAD - NBU 921-220

43-047-52578 NBU 921-2204CS Sec 22 T09S R21E 0269 FSL 1655 FEL

BHL Sec 22 T09S R21E 0086 FSL 1816 FEL

43-047-52579 NBU 921-22P4BS Sec 22 T09S R21E 0280 FSL 1606 FEL

BHL Sec 22 T09S R21E 0581 FSL 0494 FEL

43-047-52581 NBU 921-22P4CS Sec 22 T09S R21E 0278 FSL 1616 FEL

BHL Sec 22 T09S R21E 0251 FSL 0494 FEL

43-047-52590 NBU 921-2204BS Sec 22 T09S R21E 0271 FSL 1645 FEL

BHL Sec 22 T09S R21E 0416 FSL 1816 FEL

43-047-52612 NBU 921-2201BS Sec 22 T09S R21E 0276 FSL 1625 FEL

BHL Sec 22 T09S R21E 1079 FSL 1817 FEL

43-047-52613 NBU 921-2201CS Sec 22 T09S R21E 0274 FSL 1635 FEL

BHL Sec 22 T09S R21E 0747 FSL 1816 FEL

#### WELL PAD - NBU 921-22M

43-047-52586 NBU 921-22M1BS Sec 22 T09S R21E 0695 FSL 0660 FWL

BHL Sec 22 T09S R21E 1080 FSL 0823 FWL

43-047-52587 NBU 921-22M1CS Sec 22 T09S R21E 0686 FSL 0654 FWL

BHL Sec 22 T09S R21E 0748 FSL 0823 FWL

43-047-52588 NBU 921-22M4BS Sec 22 T09S R21E 0678 FSL 0649 FWL

BHL Sec 22 T09S R21E 0416 FSL 0823 FWL

43-047-52589 NBU 921-22M4CS Sec 22 T09S R21E 0670 FSL 6043 FWL

BHL Sec 22 T09S R21E 0086 FSL 0823 FWL

Page 3

Page 4

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L Coulthard

Disc. cn=Michael L. Coulthard, o=Bureau of Land Management,
ou=Branch of Minerals, email-Michael\_Coulthard@blm.gov, c=US
Date: 2012.05.15 07:17:01 -06'00'

bcc: File - Natural Buttes Unit Division of Oil Gas and Mining Central Files

Agr. Sec. Chron Fluid Chron

MCoulthard:mc:5-14-12

#### **WORKSHEET** APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 5/1/2012 API NO. ASSIGNED: 43047525830000

WELL NAME: NBU 921-22L4BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) PHONE NUMBER: 720 929-6356

**CONTACT:** Laura Abrams

PROPOSED LOCATION: NWSW 22 090S 210E **Permit Tech Review:** 

> SURFACE: 1672 FSL 0675 FWL **Engineering Review:**

> **BOTTOM:** 1744 FSL 0824 FWL Geology Review:

**COUNTY: UINTAH** 

**LATITUDE**: 40.01883 LONGITUDE: -109.54485 NORTHINGS: 4430861.00

UTM SURF EASTINGS: 624180.00

FIELD NAME: NATURAL BUTTES LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 010950-A PROPOSED PRODUCING FORMATION(S): BLACKHAWK

SURFACE OWNER: 2 - Indian **COALBED METHANE: NO** 

**RECEIVED AND/OR REVIEWED: LOCATION AND SITING:** 

✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: FEDERAL - WYB000291

**Potash** R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 **Drilling Unit** 

Board Cause No: Cause 173-14 Water Permit: 43-8496

Effective Date: 12/2/1999 **RDCC Review:** 

Siting: Suspends General Siting Fee Surface Agreement

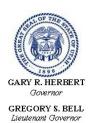
✓ Intent to Commingle R649-3-11. Directional Drill

**Commingling Approved** 

Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 4 - Federal Approval - dmason 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason



### State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

#### Permit To Drill

\*\*\*\*\*\*

Well Name: NBU 921-22L4BS API Well Number: 43047525830000 Lease Number: UTU 010950-A

Surface Owner: INDIAN Approval Date: 5/30/2012

#### Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the BLACKHAWK Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### **Commingle:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

#### Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
  - Requests to Change Plans (Form 9) due prior to implementation
  - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas Form 3160-3 (August 2007)

# UNITED STATES RECEIVED DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

JAN 1 3 2012

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

DIV. OF OIL, GAS & MINING

5.	Lease Serial No.
	UTU010950A

Approved by (Signature)  Title  Assistant Field Manager  Lands & Mineral Resources  pplication approval does not warrant or certify the applicant herations thereon.  Inditions of approval, if any, are attached.  Itle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, ates any false, fictitious or fraudulent statements or representated dditional Operator Remarks (see next page)  Electronic Submiss	Office  VERNAL FIELD OFFICE  olds legal or equitable title to those rights in the subject It  CONDITIONS OF APPROVAL ATTA	CHED o make to any department or ag	olicant to conduct
Approved by (Signature)  Title  Assistant Field Manager  Lands & Mineral Resources  pplication approval does not warrant or certify the applicant hereations thereon.  ponditions of approval, if any, are attached.  tte 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212.	Office  VERNAL FIELD OFFICE  olds legal or equitable title to those rights in the subject It  CONDITIONS OF APPROVAL ATTA	CHED	olicant to conduct
Approved by (Signature)  Title  Assistant Field Manager  Lands & Mineral Resources  pplication approval does not warrant or certify the applicant herations thereon.	Office  VERNAL FIELD OFFICE  olds legal or equitable title to those rights in the subject I	ease which would entitle the app	
Approved by (Signature)  Title Assistant Field Manager	Office		
Approved by (Signature)		·	COMUL
	Name (Printed/Typed)  Jerry Kenczk	a	JUN 05 2
REGULATORY ANALYST II	I Nama (Najata J/Tau N		\
(Electronic Submission)	Name (Printed/Typed) LAURA ABRAMS Ph: 720-929-6356		Date 12/21/2011
e following, completed in accordance with the requirements Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest Sys SUPO shall be filed with the appropriate Forest Service O  5. Signature	stem Lands, the ffice).  4. Bond to cover the operation learn 20 above). 5. Operator certification 6. Such other site specific in authorized officer.	this form: ons unless covered by an existin formation and/or plans as may b	pe required by the
e following completed in accordance with the	24. Attachments		
21. Elevations (Show whether DF, KB, RT, GL, etc. 4883 GL	22. Approximate date work will start 06/30/2012	23. Estimated duration 60-90 DAYS	
217'	11126 MD 11121 TVD	WYB000291	
Distance from proposed location to nearest well, drilling completed, applied for, on this lease, ft.	. 19. Proposed Depth	20. BLM/BIA Bond No. on	file
<ol> <li>Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 824'</li> </ol>	16. No. of Acres in Lease	17. Spacing Unit dedicated	
<ol> <li>Distance in miles and direction from nearest town or pos APPROXIMATELY 43.6 MILES SOUTH OF VE</li> </ol>	t office* ERNAL, UT	12. County or Parish UINTAH	13. Sta
At proposed prod. zone NWSW 1744FSL 824FW		Sec 22 T9S R21E M SME: BIA	er SLB
Location of Well (Report location clearly and in accor  At surface NWSW 1672ESI 675EW	dance with any State requirements.*) L 40.018920 N Lat, 109.544913 W Lon	11. Sec., T., R., M., or Blk.	
1368 SOUTH 1200 EAST VERNAL, UT 84078	Ph: 720-929-6356 Fx: 720-929-7356	NATURAL BUTTES	oratory
RERR MCGEE OIL & GAS ONSHORMali: Laura.  3a. Address	Abrams@anadarko.com  3b. Phone No. (include area code)	43-047-529 10. Field and Pool, or Explo	583
2. Name of Operator Contac	f   ALIRA ARRAMS	NBU.921-22L4BS  9. API Well No.	
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ C		891008900A  8. Lease Name and Well No	
1b. Type of Well: ☐ Oil Well     Gas Well ☐ O		7. If Unit or CA Agreement	, Name and No.

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*



#### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT** VERNAL FIELD OFFICE

**VERNAL, UT 84078** 

(435) 781-4400



Company: Well No:

API No:

Kerr McGee Oil & Gas Onshore, LP

NBU 921-22L4BS

43-047-52583

Location: Lease No:

**Agreement:** 

NWSW, Sec. 22, T9S, R21E

UTU-010950A **Natural Butte** 

**OFFICE NUMBER:** 

(435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

#### A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to:blm_ut_vn_opreport@blm.gov.
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

#### SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- Paint facilities "Shadow Gray"
- Conduct a raptor survey prior to construction operation if such activates would take place during raptor nesting season (January 1- September 30). If active raptor nests are identified during the survey, operations should be conducted according to the seasonal restrictions detailed in the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah
- If construction and/or drilling operations have not been initiated prior to August 8, 2012, conduct
  a biological survey to determine the guidelines specified in the USFWS Rare Plant Conservation
  Measures and the BLM RMP ROD. KMG will implement commitment contained in the GNB BO.
- Monitor construction operation with a permitted archaeologist.
- Monitor construction operation with a permitted paleontologist.
- Monitor construction operations with Ute Energy and Minerals technician
- Armor entire north side of pad

#### Pipeline Route from North Compressor to West Cottonwood Compressor

- If construction and/or drilling operations have not been initiated prior to August 8, 2012, conduct
  a biological survey to determine the guidelines specified in the USFWS Rare Plant Conservation
  Measures and the BLM RMP ROD. KMG will implement commitment contained in the GNB BO.
- Monitor areas with a permitted paleontologist where pipeline travels through Sections 15, 16,
   17, and 22. Monitor section 27 at the beginning of construction and spot monitor thereafter.

#### **ACTS line**

- If construction and/or drilling operations have not been initiated prior to August 8, 2012, conduct
  a biological survey to determine the guidelines specified in the USFWS Rare Plant Conservation
  Measures and the BLM RMP ROD. KMG will implement commitment contained in the GNB BO.
- Monitor areas with a permitted paleontologist where ACTS line travels through Section 15 SWSE, and Section 22 NWNE, NENW, SWSW, and SWSE.

Page 3 of 6 Well: NBU 921-22L4BS 6/1/2012

# DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

Gamma ray Log shall be run from Total Depth to Surface.

#### Variances Granted:

#### **Air Drilling**

- Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 40'from the well bore.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for the kill
  medium and will utilize a skid pump near the reserve pit to supply the water to the well bore if
  necessary.
- Automatic igniter. Variance granted for igniter due to there being no productive formations encountered while air drilling.
- FIT Test. Variance granted due to well-known geology and the problems that can occur with the FIT test.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil &

Page 4 of 6 Well: NBU 921-22L4BS 6/1/2012

Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 6 Well: NBU 921-22L4BS 6/1/2012

#### **OPERATING REQUIREMENT REMINDERS:**

 All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at <a href="https://www.ONRR.gov">www.ONRR.gov</a>.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written
  communication and must be received in this office by not later than the fifth business day
  following the date on which the well is placed on production. The notification shall provide, as a
  minimum, the following informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

Page 6 of 6 Well: NBU 921-22L4BS 6/1/2012

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Sundry Number: 31423 API Well Number: 43047525830000

			FORMS		
	STATE OF UTAH		FORM 9		
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A		
SUNDF	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In		
	oposals to drill new wells, significantly dee reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT OF CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-22L4BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	<b>9. API NUMBER:</b> 43047525830000				
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18t	9. FIELD and POOL or WILDCAT: 5NATURAL BUTTES				
4. LOCATION OF WELL FOOTAGES AT SURFACE:			COUNTY: UINTAH		
1672 FSL 0675 FWL QTR/QTR, SECTION, TOWNSI Qtr/Qtr: NWSW Section:	STATE: UTAH				
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	NATURE OF NOTICE, REPOF	T, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION		
bate of work completion.	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
10/29/2012	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
Report Date.		OTHER			
			OTHER:		
MIRU TRIPLE A BU RAN 14" 36.7# SC SACKS READY MIX	COMPLETED OPERATIONS. Clearly show all p JCKET RIG. DRILLED 20" CONDUCHEDULE 10 CONDUCTOR PIPE K. SPUD WELL LOCATION ON O 7:30 HRS.	ICTOR HOLE TO 40'. CEMENT WITH 28 CTOBER 29, 2012 AT	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY November 01, 2012		
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	TITLE Regulatory Analyst II			
SIGNATURE	. 20 020 0001	DATE			
N/A		11/1/2012			

SUBMIT AS EMAIL

**Print Form** 

# BLM - Vernal Field Office - Notification Form

Oper	rator KERR-McGEE OIL & GAS	Rig Name	e/# BUCI	KET RIG
Subn	nitted By <u>J. Scharnowske</u>	Phone Nur		
Well	Name/Number NBU 921-22L4	BS		
Qtr/C	Qtr <u>NWSW_</u> Section <u>22</u> 7	Township <u>9</u>	<u>s</u> R	ange <u>21E</u>
	e Serial Number <u>UTU010950A</u>			
API I	Number <u>4304752583</u>			
	d Notice – Spud is the initial spelow a casing string.	spudding o	f the we	ll, not drilling
	Date/Time <u>10/27/2012</u>	13:00 HRS	AM 🗌	РМ
times	ng – Please report time casin s. Surface Casing Intermediate Casing Production Casing Liner Other	g run start	s, not ce	ementing
	Date/Time <u>11/19/2012</u>	08:00 HRS	AM 🗌	PM 🗌
BOPE	E Initial BOPE test at surface of BOPE test at intermediate call 30 day BOPE test Other	casing poir asing point	it :	RECEIVED OCT 2 5 2012 DIV. OF OIL, GAS & MINING
	Date/Time		AM 🗌	РМ
Rema	arks estimated date and time. Please	CONTACT KENN	Y GATHINGS A	AT
435.828	8.0986 OR LOVEL YOUNG AT 435.781.7051			

#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

#### **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

P.O. Box 173779

Address:

city DENVER

state CO

Phone Number: (720) 929-6857

#### Well 1

API Number	Well	Name	QQ Sec Twp			Rng County	
4304752583 NBU 921-22L4B		BS	NWSW			21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date 10/29/2012			ntity Assignment Effective Date	
B	9999	2900			1119	112012	

zip 80217

Comments:

MIRU TRIPLE A BUCKET RIG.

WSMVD

SPUD WELL LOCATION ON OCTOBER 29, 2012 AT 07:30 HRS. BHL: NWSW

#### Well 2

J 921-22K2DS		NWSW	<b>Sec</b> 22	Twp 9S	Rng	County
				30	21E	UINTAH
rent Entity lumber	New Entity Number	Spud Date 10/29/2012			ntity Assignment Effective Date	
9999	2900			1110	111912012	
	9999	lumber Number	Number         Number           9999         3900	Number         Space Ball           9999         3900         10/29/201	Number         Number           9999         3900           10/29/2012	Number         Number         Spud Bate         Entity           9999         3900         10/29/2012         10/29/2012

MIRU TRIPLE A BUCKET RIG.

WSMVD

SPUD WELL LOCATION ON OCTOBER 29, 2012 AT 10:30 HRS. BHL -: nesu

Well 3

API Number	Well	QQ	Sec	Twp	Rng	County	
4304752585	NBU 921-22L1CS		NWSW		98	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	S	Spud Date		Ent	y Assignment fective Date
B	9999	2900	10/29/2012			111	912012
Comments:						<del></del>	11 3013

MIRU TRIPLE A BUCKET RIG.

SPUD WELL LOCATION ON OCTOBER 29, 2012 AT 13:30 HRS.

WSMVD

Francisco (S. C.

#### **ACTION CODES:**

A - Establish new entity for new well (single well only)

B - Add new well to existing entity (group or unit well)

C - Re-assign well from one existing entity to another existing entity
 D - Re-assign well from one existing entity to a receive D

E - Other (Explain in 'comments' section)

NOV 07 2012

Lindsey Frazier

Name (Please Print)

Signature

**REGULATORY ANALYST II** 

11/1/2012

Title

Date

Sundry Number: 33352 API Well Number: 43047525830000

	STATE OF UTAH		FORM 9
ι	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-22L4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047525830000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 17 3779 720 929-	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1672 FSL 0675 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	tip, range, Meridian: 22 Township: 09.0S Range: 21.0E Mei	ridian: S	STATE: UTAH
11. CHECK	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date: 1/2/2013		☐ SITA STATUS EXTENSION	
	WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:
No Activity for t	completed operations. Clearly show the month of December 201	I2. Well TD at 2,890	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 03, 2013
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUM</b> 720 929-6857	BER TITLE Regulatory Analyst II	
SIGNATURE N/A		<b>DATE</b> 1/2/2013	

RECEIVED: Jan. 02, 2013

Sundry Number: 33794 API Well Number: 43047525830000

	STATE OF UTAH		FORM 9
ι	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
SUNDR	Y NOTICES AND REPORTS ON	I WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
	posals to drill new wells, significantly dee reenter plugged wells, or to drill horizonta n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-22L4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047525830000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	PH n Street, Suite 600, Denver, CO, 80217 37	IONE NUMBER: 779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1672 FSL 0675 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	tlP, RANGE, MERIDIAN: 22 Township: 09.0S Range: 21.0E Meridian	n: S	STATE: UTAH
11. CHECK	K APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
1/11/2013	_	OF IN OTHER DESIGNATION	
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
FINISHED DRI PRODUCTION C DETAILS OF CASING	COMPLETED OPERATIONS. Clearly show all p ILLING TO 10,054' ON 01/09/20 CASING. RELEASED H&P 318 R G AND CEMENT WILL BE INCLUI EPORT. WELL IS WAITING ON FII ACTIVITIES	13. CEMENTED IG ON 01/11/2013. DED WITH THE WELL	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 14, 2013
		I	
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	TITLE Regulatory Analyst II	
SIGNATURE N/A		<b>DATE</b> 1/14/2013	

# State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# HP 318 Submitted By HARMON COCKRELL Phone Number 435-828-0988/1544 Well Name/Number NBU 921-22L4BS Qtr/Qtr NW/SW Section 22 Township 9S Range 21E Lease Serial Number UTU 010950-A API Number 4304752583
Casing – Time casing run starts, not cementing times.
Production Casing Other
Date/Time <u>01/10/2013</u> <u>06:00</u> AM ⊠ PM □
BOPE Initial BOPE test at surface casing point Other
Date/Time AM Description PM Description
RECEIVED  AND 9 2013  Location To: DIV. OF OIL, GAS & MINING
Date/Time AM PM
Remarks TIME IS ESTIMATED

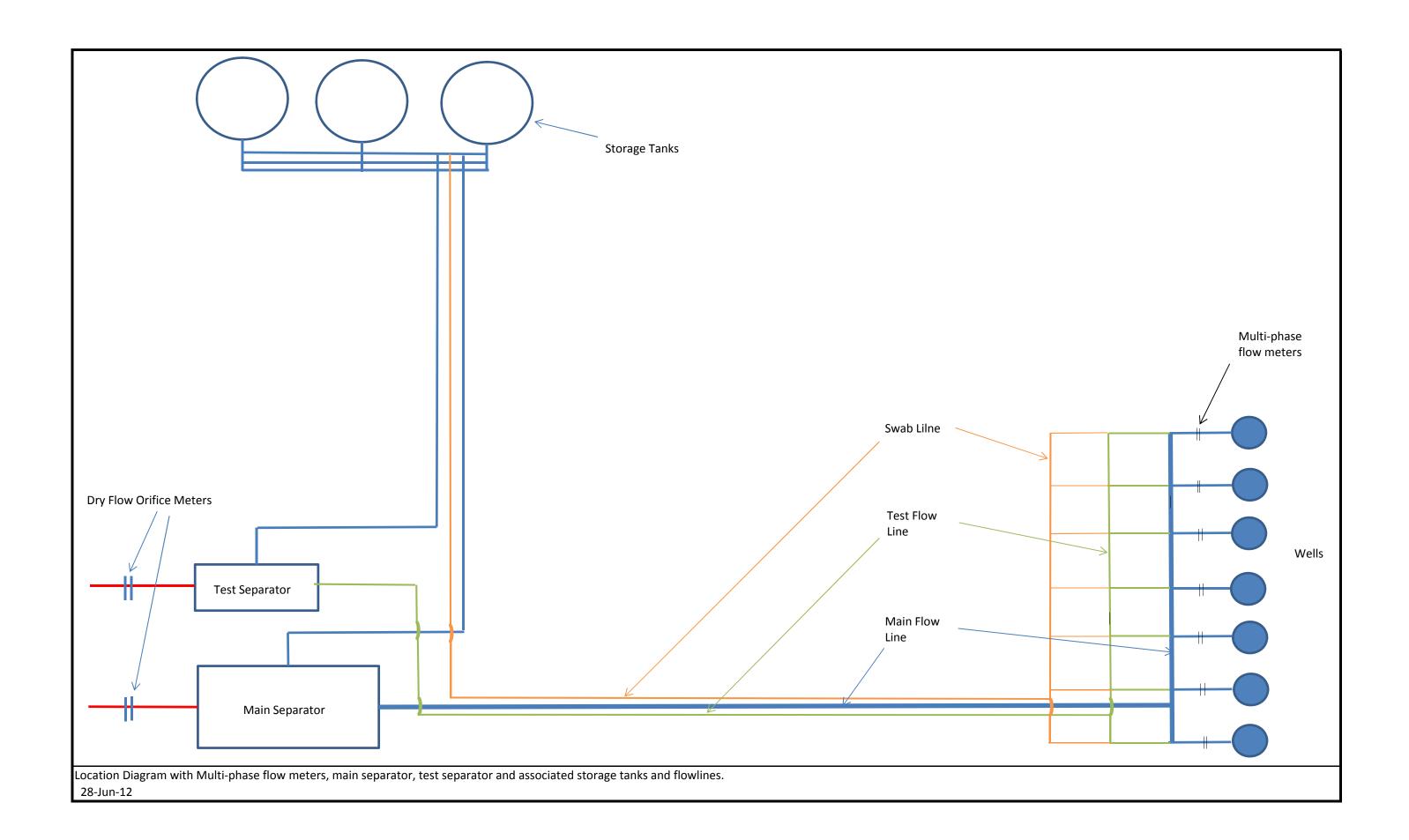
Sundry Number: 34538 API Well Number: 43047525830000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES	,	FORM 9
	DIVISION OF OIL, GAS, AND MININ		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
SUNDF	RY NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
	oposals to drill new wells, significantly de reenter plugged wells, or to drill horizonta n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-22L4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047525830000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	P h Street, Suite 600, Denver, CO, 80217 3	HONE NUMBER: 779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1672 FSL 0675 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 22 Township: 09.0S Range: 21.0E Meridia	n: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
The operator is refrom a pad, and to the pad based upoperiodic well tests. I wells on the (4304752577), NE	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  COMPLETED OPERATIONS. Clearly show all questing the option to measure allocate gas production to the on multi-phase flow measurements allocate see the attached documents. NBU 921-22L pad include: NBU 921-22L1BS (4304752582) 585), and NBU 921-22L4BS (4304752582) 585), and NBU 921-22L4BS (4304752582)	e total gas produced e individual wells on ent at each well and nents. Thank you. The U 921-22K2DS , NBU 921-22L1CS	CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER: Multi-Phase Meter  Depths, volumes, etc.  Approved by the Utah Division of Oil, Gas and Mining  Date: February 25, 2013  By:
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	TITLE Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 2/6/2013	

Sundry Number: 34538 API Well Number: 43047525830000

The fluids from each well will be measured utilizing a multi-phase flow meter and then directed to a common separator for all wells on the pad. Liquids would be directed to tanks and the gas from all the wells measured through a calibrated orifice meter. The volume of gas measured through this meter, plus fuel gas consumed on location, will be the volume of gas that is produced from the pad. Gas volume for each individual well on the pad will be based on an allocation formula utilizing the total pad volume measured plus fuel gas consumed and the calculated volume from each well utilizing the multi-phase flow meters. The multi-phase flow meter volume calculation will be calibrated by periodic individual well tests.

RECEIVED: Feb. 06, 2013



Sundry Number: 35226 API Well Number: 43047525830000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-22L4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047525830000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 73779 720 92	9. FIELD and POOL or WILDCAT: 9-65NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1672 FSL 0675 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NWSW Section:	IIP, RANGE, MERIDIAN: 22 Township: 09.0S Range: 21.0E Meri	dian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REP	ORT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT			
Report Date: 3/4/2013	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
No Activity for t	completed operations. Clearly show a the month of February 2013	Well TD at 10,054	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 05, 2013
NAME (PLEASE PRINT) Laura Abrams	<b>PHONE NUMB</b> 720 929-6356	ER TITLE Regulatory Analyst II	
SIGNATURE N/A		<b>DATE</b> 3/4/2013	

Sundry Number: 36139 API Well Number: 43047525830000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 010950-A
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-22L4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047525830000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 7 3779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1672 FSL 0675 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 22 Township: 09.0S Range: 21.0E Meri	idian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT     Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
3/26/2013	WILDCAT WELL DETERMINATION	OTHER	OTHER:
The subject wel	completed operations. Clearly show If was placed on production I History will be submitted w report.	on 03/26/2013. The	<u> </u>
NAME (PLEASE PRINT) Luke Urban	<b>PHONE NUME</b> 720 929-6501	BER TITLE Regulatory Specialist	
SIGNATURE N/A		DATE 4/1/2013	
L + +4 * *		.,.,_0.0	

Form 3160-4 UNITED STATES (August 2007) DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT									FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010								
	WELL	COMPL	ETION C	R RE	COME	PLETIC	ON RE	EPOF	RT A	ND I	LOG				ease Seria JTU0109		
la. Type of	And the second	Oil Well	☑ Gas		☐ Diy	100	Other				C1 10	Lucius I	77	6. If	Indian, A	llottee o	r Tribe Name
b. Type of	f Completion	Othe	ew Well	□ Wor	k Over	O D	сереп		Plug I	Back		ff. Re	svr.	7. U	nit or CA JTU6304	Agreem	ent Name and No.
2. Name of	Operator MCGEE OII	&GAS O	NSHOREE	LMail: b	Co ike urba	ontact: Li	UKE UI	RBAN	T					8. L	ease Nam	e and W	
	1099 18T			A SALAS ALL PORCE	110.0101	ar leagur to	1 3a.	Phone	: No.	(includ	le area c	ode)			PI Well N	and a second of	ECT NO G
STATE OF THE STATE	DENVER	CO 802	02				Ph	720-	929-	6501	1000						43-047-52583
4. Location	of Well (Re	port locati	on clearly ar	id in acc	ordance	with Fed	leral req	uireme	ants)*						Field and VATURA		Exploratory ES
At surfa	ce NWSV rod interval r		L 675FWL			al, 109. 13FWL	544913	W Lo	m					11.	Sec., T., F or Area S	L, M., or Sec 22 T	Block and Survey 9S R21E Mer SLB
					arat o	13F VVL							Ī		County or	Parish	13. State
At total		SW 1750	FSL 817FV		D. I			16 1		1	17.0				JINTAH	/INE 1/1	UT CLA
14. Date Sp 10/29/2				/09/201	Reached 3	1			& A	Complex 2013	Ready	to Pro	od.	17.	Bievanon 4	906 KB	B, RT, GL)*
18. Total D	epth:	MD TVD	10054 10049		19. Ph	ig Back 7	Γ.D.:	MD			997 995		20. Dep	h Br	idge Plug		MD TVD
21. Type B	lectric & Oth	er Mechar	ical Logs R	un (Sub	mit copy	of each)							ell cored ST run?	9	No No	D Ye	(Submit analysis)
CBUG	R/CCL/TEM	P											onal Sur	vey?	No No	⊠ Ye	s (Submit analysis) s (Submit analysis)
23. Casing a	nd Liner Rec	ord (Repo	rt all strings	set in w	ell)										_		
Hole Size	Size/G	irade	Wt. (#/ft.)	To:	A	Bottom (MD)		Cemer Depth	nter	0.00	of Sks. of Cem	250	Slurry (BBI	t ement		ıt Top*	Amount Pulled
20.000	14.	000 STL	36,7		0	40	)					28					
11.000	8.6	25 IJ-55	28.0		0	2856	3					725				0	
7.875	4.	500 1-80	11,6		0	4968		_	4			780			38	860	
7,875	4,50	00 P-110	11,6	-	968	10039	9	-	+								
			-														1000
24. Tubing	Record						2			Ų.		_					
	Depth Set (N		cker Depth	(MD)	Size	Dep	th Set (1	MD)	Pa	ker De	epth (M	0)	Size	D	epth Set (	MD)	Packer Depth (MD)
2.375 25. Produci		9307		- 11		126	. Perfor	etion D	legar	1		_		_			
CONTRACTOR OF THE PARTY OF THE			Ton	$\neg$	Datte		ta con			10		T	Size	1	No. Holes	Т	Perf. Status
A) -	ormation WAS/	ATCH	Top	6538	Botto	800	- 2	Perfora			TO 780	0	0.36			6 OPE	
B)	MESAVE	ALSO VIEW CONTRACTOR		7982		777					TO 977		0.36	_		8 OPE	
(C)	3,000	24.5															
D)		way to															
27. Acid, Fr	racture, Treat	tment, Cer	nent Squeez	e, Etc.								O.					
	Depth Interv					27			-		d Type		terial				
	65	538 TO 97	77 PUMP	12,528 B	BLS SLI	CK H2O	& 296,45	59 LBS	30/50	OTTA	WA SA	AD.		-		35 32	
		_		_				-	-		-						
28. Product	ion - Interval	A	1 -						==								
Date First	Test	Hours	Test	Oil	Gns		Water		il Gris			ins		Produc	tion Method		
Produced 03/26/2013	Date: 04/01/2013	Tested 24	Production	BBL 0.0	MC 2	076.0	0.0		or, Al			iravity			FL	OWS FR	OM WELL
Clicke	Tog. Press.	Csg.	24 Hz.	Oil	Gas		Water	- 0	liOtes			Vell Sta	tus				
Size 20/64	Flwg 1527	Press, 2249.0	Rate	BBL	MC	F 2076	BBL 0	R	tatio		-	Po	W				
	tion - Interv							_			_		-10/				
Date First	Test	Hours	Test	Oit	Gas		Water		)il Gras			igs .	-	Praduc	tion Melhad		
Produced	Date	Tested	Production	BBL	MC	ь	BBL	C	lon. Al	9		lavity					
Choke Size	Tog, Press. Flwg. SI	Cag. Press.	24 Hr. Rate	Oil HRL	Gea MC		Water BBL		ias:Oil Intio	1		Vell Sta	tus				

<sup>(</sup>See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #205515 VERIFIED BY THE BLM WELL INFORMATION SYSTEM
\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

Test Date Thg. Press.	Hours Tested	Test Production	Oil BBL.	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Preduction Method	
	-						ana.io		
Flwg. Sl	Cag. Press.	24 Fir. Rate	Oil BBL	Gns MCF	Water BBL	Gres Oli Ratio	Well State	ns	
action - Interv	ral D		-			-			
Test Date	Hours Tested	Test Production	Oil BBI.	Giis MCF	Water BBL	Oil Gravity Corr. API	Gris Gravity	Production Method	
Thg. Press. Fiwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas Oil Ratio	Well State	os	
		CARL TO THE		21	*				
all important	zones of p	orosity and	contents th					11. Formation (Log) was	KCI S
Formation		Тор	Botto	m,	Description	as, Contents, etc		Name	Top Meas, Depth
rst 210 ft. of te hole was C P-110 csg	the surfa drilled wit was run	ce hole wa: h an 11in. I from 4968	s drilled w bit. DQX	l-80 csq wi	as run from sui	face to 4968		GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1562 1882 2389 4953 7973
unicating w	th the BL	M was red	nested to	project the	TD of this we	I in order to			
etrical/Mech	snical Log			on	The second second second	550 y \$45.00kg			4. Directional Survey
y certify tha	the forego	The state of the state of the state of	tronic Sub	mission #2	05515 Verified	by the BLM V	Vell Informat	ion System.	hed instructions):
(please print,	LUKE U	RBAN				Tide §	R REGULAT	TORY SPECIALIST	
ure	(Electron	nic Submiss	sion)			Date 0	14/26/2013		
	Tig. Press. Fivg. striction of Gasy ary of Perous all important actuding depoveries. Formation  Formation	Tig. Press. Flwg. St  ition of Gas/Sold, used try of Porous Zones (In all important zones of p activiting depth interval overies.  Formation  Formation	Tig. Press.  Tig. Press.  St  ition of Gas/Sold, used for fuel, very of Porous Zones (Include Aquifull important zones of porosity and actuding depth interval tested, cush overies.  Formation  Top  Top  Top  Top  Top  Top  Top  T	Tig. Press.  Tig. Press.  Tig. Press.  St  ition of Gas/Sold, used for fuel, vented, etc.)  Try of Porous Zones (Include Aquifers):  ill important zones of porosity and contents the cluding depth interval tested, cushion used, to overies.  Formation  Top  Botto  Botto  Top  Botto  Top  Botto  Botto  Top  Botto  Top  Botto  Botto  Top  Botto  Botto  Top  Botto  Botto  Botto  Top  Botto  Botto  Top  Botto  Botto  Botto  Top  Botto  B	Tig. Press.  Cog. Press.  Five.  St.  Cog. Press.  Cog. Rate.  Rate.  BBL.  MCF  Tig. Press.  Cog. Rate.  BBL.  MCF  Tig. Press.  Cog. Rate.  BBL.  MCF  Tig. Press.  It important zones (Include Aquifers):  Ill important zones of porosity and contents thereof: Core activiting depth interval tested, cushion used, time tool operators.  Formation  Top  Bottom  Top  Bottom  Top  Bottom  Top Solvente will be surface hole was drilled with a 12 ?  e hole was drilled with an 11in. bit. DQX I-80 csg w C P-110 csg was run from 4968 ft. to 10,039 ft. Attastory and perforation report.  Intific Drilling Survey to TD for this well was never counicaling with the BLM, was requested to project they the BH footages. The TD listed throughout the core enclosed attachments:  etrical/Mechanical Logs (I full set req'd.)  dry Notice for plugging and cement verification  y certify that the foregoing and attached information is or Electronic Submission #2  For KERR-MCGEI	Tag. Press. Tag. Press. Tag. Press. St.  Tag. Part St.  Tag. Press. St.  Tag. Press. St.  Tag. Part St.  Tag. Press. St.  Tag. Part St.  Tag. Press. St.  Tag. Press. St.  Tag. Part St.  Tag. Press. St.  Tag. Press. St.  Tag. Part St.  Tag. Press. St.  Tag. Press. St.  Tag. Part St.  Tag. Press. St.  Tag. Part St.  Tag. Press. St.  Tag. Press. St.  Tag. Press. St.  Tag. Part St.  Tag. Pa	Tog. Press.  Cog. 24 fft. Oil Gas Water BBL Corr.API  Tog. Press.  Cog. 24 fft. Oil Gas McF BBL Corr.API  Tog. Press.  Itition of Gas(Sold, used for firet, vented, etc.)  Tog of Porous Zones (Include Aquifers):  Ill important zones of porosity and contents thereof: Cored intervals and all drill-stem telading depth interval tested, cushion used, time tool open, flowing and shut-in pressure overies.  Formation Top Bottom Descriptions, Contents, etc.  Formation Top Bottom Descriptions, Contents, etc.  Tog. Policy of the surface hole was drilled with a 12 ? in. bit. The remainder of e hole was drilled with a 11 in. bit. DCX 1-80 csg was run from surface to 4968 CP-110 csg was run from 4868 ft. to 10,039 ft. Attached is the chronological story and perforation report.  Intific Drilling Survey to TD for this well was never completed. The operator, after unleading with the BLM, was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to project the TD of this well in order to the BLM was requested to the BLM was represented the BLM was requested to th	Tested Production BBIL MCF BBIL Corr. API Gravity Tig. Press. Five. 24 ftt. Eate BBIL MCF BBIL Corr. API Gravity Tig. Press. Five. 24 ftt. Eate BBIL MCF BBIL Ratio Well San Ratio Five. Press. 25 ft. BBIL BBIL BBIL BBIL BBIL BBIL BBIL BBI	Test Press. Cot. Private Bill. DOC Bill. Com. API Greety.  Test Press. Cot. Private Bill. Doll Ga. Water Bill. Ratio Well Sacus  Ittion of Gas/Sold, used for fuel, venued, etc.)  Ittion of Gas/Sold, used for fuel, venued, etc.)  Ittin portant zones of perosity and centents thereof: Cored intervals and all drill-stem acididing depth interval tested, cushien used, time tool open, flowing and shut-in pressures overs.  Formation Top Bottom Descriptions, Contents, etc. Name GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE  Tel 210 ft. of the surface field with an 11 in. bit. DOX 1-80 cag was run from extracted to 4968 Co. P-110 cag was run from extracted to 10,039 ft. Attached is the chronological story and perforation report.  Intific Drilling Survey to TD for this well was never completed. The operator, after unicaling with the Bild, was requested to project the TD of this well in order to the Bild Was requested to project the TD of this well in order to the Bild Was requested to project the TD of this well in order to the Bild Was requested to project the TD of this well in order to the Bild Was requested to project the TD of this well in order to the Bild Was requested to project the TD of this well in order to the Bild Was requested to project the TD of this well in order to the Bild Was requested to project the TD of this well in order to the Bild Was requested to project the TD of this well in order to the program of the completion report corresponds to the construction of the Bild Was requested to project the TD of this well in order to the program and attached information is complete and correct as determined from all available records (see attachments).  Evertically the time to the Vernal Bild Well Information System.  Evertically the time to the Vernal Bild Well Information System.  Evertically the time to the Vernal Bild Well Information System.

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API Well Number: 43047525830000

#### Additional data for transaction #205515 that would not fit on the form

#### 32. Additional remarks, continued

the TD depth recorded in the attached drilling chrono. The calculated BH footages correspond to the TD Projection. Please find the attached TD projection, TD Projection Verification and revised Scientific Drilling Survey.

A subsequent report with the revised survey will be completed and filed with the BLM after the subject well?s production levels off.

RECEIVED: Apr. 26, 2013

						s ROC		GION ry Report				
Well; NBU 921-:	22L4BS R	ED						Spud Date: 11	/13/2012			
Project: UTAH-L	JINTAH			Site: NBU	J 921-22L	PAD			Rig Name No: PROPETRO 12/12, H&P 318/318			
Event: DRILLIN	3			Start Date	e: 10/30/2	2012			End Date: 1/11/2013			
Active Datum: R Level)	KB @4,9	06.00usft (a	bove Mean So		UWI: NW/SW/0/9/9			S/21/E/22/0/0/26/PM/S/1672/W/0/675/0/0				
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
11/13/2012	0:00	- 6:00	6,00	MIRU	01	A	Р		MOVE PRO PETRO EQUIPMENT TO - 5 HANDS, 1 RIG, 5 SEMI TRUCKS, 1 2-TON TRUCK /// WAIT ON DAYLIGHT TO MOVE CLOSED LOOP EQUIPMENT & CAMP			
	6:00	- 18:00	12.00	MIRU	01	В	P		MOVE RIG 1 MILE TO NEW LOCATION /// JD ~  1PUSHER, 1 SWAMPER, 5 TRUCKS & DRIVERS /// STALLION ~ 3 MEN, 3 PICK UPS, 1 TRUCK, PRO PETRO ~ 1 FORKLIFT, 1 PUSHER, 5 HANDS /// NOV~ 4 HANDS /// KNOP~ 1 HAND & 1PICK UP /// RELEASE TRUCKS @ 18:00 11/13/2012			
	18:00	- 22:00	4.00	MIRU	01	В	P		RIG UP NOV EQUIPMENT /// RIG UP DIVERTER & FLOWLINE /// SPOT RIG OVER WELL, SET CATWALK & PIPE RACKS, HOOK UP & PRIME PUMP & PRIME			
	22:00	- 22:30	0.50	DRLSUR	06	A	P		PU 12.25" BIT & 8" MUD MOTOR			
	22:30	- 0:00	1.50	DRLSUR	02	В	P		DRILL 12,25"SURFACE HOLE F/44"-210"  ROP= 166" @ 111FPH  WOB= 5-15K.  RPM= TOP DRIVE~55 / MOTOR ~83 #/ TOTAL  RPM~138  GPM= 491 @ 120 SPM  SPP ON/OFF= 800/500  UP/DN/ROT = 37/33/35  NOV ON LINE  MW= 8.5			
11/14/2012	0:00	- 0:30	0.50	DRLSUR	06	A	Р		TOOH & LAY DOWN 12,25" BIT			
	0:30	- 1:30	1.00	DRLSUR	06	A	P		PICK UP 11" BIT, DIR. TOOLS, SCRIBE & TIH			
	1:30	- 6:00	4,50	DRLSUR	02	В	P		DRILL 11", SURFACE HOLE F/210'-720' ROP=510' @ 113 FPH WOB=18-22K RPM= TOP DRIVE~55 / MOTOR ~83 /// TOTAL RPM~ 138 GPM=491 @ 120 SPM SPP ON/OFF=900/700 UP/DOWN/ ROT= 59/47/51K~DRAG= 2K TORQUE ON/OFF=2700/1200 NOV ON LINE MW= 8.5 NO HOLE ISSUES			

				Onera	tion S	umma	ry Report	
				Opera	tion o	umma		the state of the s
Well: NBU 921-			Tour Mai	1.004.001	DAD		Spud Date: 11	
Project: UTAH-	1. D2-MATGEOGRAPH		Site: NBU			-		Rig Name No: PROPETRO 12/12, H&P 318/318
event: DRILLIN			Start Date	Carl March Control	CICTON.	IDIO4 IE IO	ow weeks the t	End Date: 1/11/2013
\ctive Datum: F .evel)	RKB @4,906,00usft (a	bove Mean S	ea	UVVI: N	rwsvwors	#5/21/E/2	2/0/0/26/PM/S/1	672/M/0/675/0/0
Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation
	Start-End	(hr)			Code		(usft)	
	6:00 - 12:00	6.00	DRLSUR	02	В	P		DRILL 11", SURFACE HOLE F/720" - 1221"  ROP= 501' @ 84 FPH  WOB= 18-22K,  RPM= TOP DRIVE~55 / MOTOR ~83 #/ TOTAL RPM- 138  GPM= 491 @ 120 SPM  SPP ON/OFF= 1200/1050  UP/DOWN/ ROT= 69/49/59K,~DRAG= 10K  TORQUE ON/OFF=2900/1200  NOV ON LINE  MW= 8.5  SLIDE = 6' / 3%  1.15' ABOVE & 1.1' LEFT OF TARGET LINE
	12:00 - 18:00 18:00 - 0:00	6.00	DRLSUR	02	В	P		NO HOLE ISSUES  DRILL 11". SURFACE HOLE F/ 1221'- 1748'  ROP= 527' @ 88 FPH  WOB= 18-22K.  RPM= TOP DRIVE~55 / MOTOR ~83 /// TOTAL RPM~ 138  GPM= 491 @ 120 SPM  SPP ON/OFF= 1300/1050  UP/DOWN/ ROT= 71/51/61K,~DRAG= 10K  TORQUE ON/OFF=2700/1000  NOV ON LINE  MW= 8.5  SLIDE = 66' / 4%  2' BELOW & .2' LEFT OF TARGET LINE  NO HOLE ISSUES  DRILL 11". SURFACE HOLE F/ 1748'-2260'
								ROP= 521'@ 85 FPH WOB= 18-22K. RPM= TOP DRIVE~55 / MOTOR ~83 /// TOTAL RPM- 138 GPM= 491 @ 120 SPM SPP ON/OFF= 1450/1250 UP/DOWN/ ROT= 78/67/73K.~DRAG= 5K TORQUE ON/OFF=2800/1000 NOV ON LINE MW= 8.5 SLIDE = 78' / 4% 5.5' BELOW & 1.5' RIGHT OF TARGET LINE NO HOLE ISSUES
11/15/2012	0:00 - 6:00	6.00	DRLSUR	02	В	P		DRILL 11*. SURFACE HOLE F/ 2280*- 2659' ROP= 399"@ 66.5 FPH WOB= 18-22K. RPM= TOP DRIVE~65 / MOTOR ~83 /// TOTAL RPM~ 138 GPM= 491 @ 120 SPM SPP ON/OFF= 1450/1250 UP/DOWN/ ROT= 81/69/73K,~DRAG= 8K TORQUE ON/OFF=2800/1000 NOV ON LINE MW= 8.5 SLIDE = 78' / 4% 5.5' BELOW & 1.5' RIGHT OF TARGET LINE NO HOLE ISSUES

							KIES RE Summa	ry Report				
Well: NBU 921-	22L4BS R	ED	4				A DESCRIPTION	Spud Date: 11	/13/2012			
Project: UTAH-I				Site: NBU	921-221	PAD			Rig Name No: PROPETRO 12/12, H&P 318/318			
Event: DRILLIN				Start Date	10/20/2	040	T		End Date: 1/11/2013			
		00.00.00.00	have Mana C		ate: 10/30/2012 End Date: 1/11/2013  UWI: NW/SW/0/9/S/21/E/22/0/0/26/PW/S/1672/W/0/675/0/0							
Active Datum: F .evel)	скв @4,9	a) nauuu.ou	bove Mean S	ea	OVVI. IN	Waywor.	SIGIZ I/EIZ	ETOTO/ZO/FTW/O/T	012/14/010/3/070			
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
	10:00 12:00	- 12:00 - 15:30 - 16:00	2.00 3.50 0.50	DRLSUR DRLSUR DRLSUR CSGSUR	05 06 12	A A A	PPPP		DRILL 11", SURFACE HOLE F/ 2659-2870  ROP= 211' @ 53 FPH  WOB= 18-22K.  RPM= TOP DRIVE~55 / MOTOR ~83 /// TOTAL RPM~ 138  GPM= 491 @ 120 SPM  SPP ON/OFF= 1550/1300  UP/DOWN/ ROT= 83/70/75K,~DRAG= 8K  TORQUE ON/OFF=2700/1200  NOV ON LINE  MW= 8.5  SLIDE = 234' / 17.5%  7.5' BELOW & .4' LEFT OF TARGET LINE  NO HOLE ISSUES  CIRCULATE & CONDITION HOLE FOR 8-5/8" CSG  LAY DOWN DRILL STRING & DIR. TOOLS  PJSM FOR RUN CSG /// MOVE PIPE RACKS &			
	15:30	- 16:00	0.50	CSGSUR	12	A	Р		PJSM FOR RUN CSG // MOVE PIPE RACKS &			
	16:00	- 18:30	2.50	CSGSUR	12	С	P		CATWALK & MOVE CSG INTO POSITION TO PICK UP RUN 64 JT'S, 8-5/8", 28#, J-55, LT& C CSG /// SHOE			
	1000000	10.00	2.00	0000011					SET @ 2835' & BAFFLE @ 2787'			
	18:30	- 19:00	0.50	CSGSUR	12	В	Р		CIRCULATE CSG /// RUN 200' OF 1" DOWN			
									BACKSIDE, RIG DOWN & MOVE RIG OF WELL //			
									INSTALL CMT HEAD & PLUG/// PJSM FOR CEMENTING			
	18.00	+ 21:00	2.00	CSGSUR	12	E	P		RIG UP PUMP TRUCK /// TEST LINES TO 1500 PSI /// PUMP 140 BBLS WATER AHEAD FOLLOWED BY 20 BBL GEL WATER FLUSH /// LEAD = 300sx CLASS G CMT @ 12.0 ppg & 2.86 YIELD /// TAIL= 200sx CLASS G CMT @ 15.8 ppg & 1.15 YIELD /// DROP PLUG & DISPLACE W/ 173 BBL'S WATER /// PLUG DN @ 20:12 11/15/2012 /// BUMP PLUG W/ 1200 PSI /// FINAL LIFT = 800 PSI /// CHECK FLOAT- DID NOT HOLD~ SHUT IN FOR 4 HOURS /// 23 BBL'S CMT TO SURFACE /// PUMP 1ST TOP OUT DOWN 1" W/ 150sx CMT @ 15.8ppg & 1.15 YIELD~ CMT TO SURFACE BUT FELL BACK /// WAIT 1.5 HOURS & PUMP 2nd TOP OUT W/ 75 SX ~ CMT TO SURFACE 8 STAYED  RELEASE RIG @ 21:00 11/15/2012 TO NBU 921-22L1CS			
12/26/2012	8:00	- 18:00	12.00	RDMO	01	E	P		RIG DOWN ROTARY TOOLS, PREPARE RIG F/ MOVE "SPLIT STACK F/ RISER & LAY DOWN RISER, SKID RIG BACK, R/D TUGGER LINES, STAND PIPE, L/D V DOOR, r/d PIPE WRANGLER, PULL ELECTRICAL R/D BOILER, BLOW DOWN LINES, WINTERIZE PUMPS, R/D PUMPS, PITS, & MISC., MOVE MUD STORAGE, MOVE CAMPS, 90 % RIGGED DOWN,			
	18:00	- 0:00	6.00	RDMO	21	С	P		20% MOVED WAIT ON DAYLIGHT			
		0.00	0.00	TADINO	46.5	-	200		THE RESERVE OF THE PARTY OF THE			

					Opera	tion S	umma	ry Report	
Vell: NBU 921-2	101 ADC D	ED.			Opora			Spud Date: 11	/13/2012
roject: UTAH-U		EU		Site: NBU	921-221	PAD		opus bare. 11	Rig Name No: PROPETRO 12/12, H&P 318/318
	1000								End Date: 1/11/2013
vent DRILLING	OTHER TO THE REAL PROPERTY.			Start Date			19/24 /E/21	ommoe/PM/S/4	672/M/0/675/0/0
ctive Datum; R evel)		,						21.80.91.70.27.20.20.21.2	All through the property of a 1
Date	Sta	Γime ar⊩End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00	- 18:00	12.00	RDMO	01	В	P		SAFETY MEETING W JONES , CURTS CRANE , & RIG CREWS , RIG DOWN , LOAD OUT TRUCKS , MOVE RIG 1/2 MILE , SET IN RIG , 50% MOVED & SET IN , 20% RIGGED UP , 8 JONES TRUCKS , 2 FORKLIFTS , 2 CRANES , 17 JONES HANDS , 3 CURTS CRANE HANDS , 12 H&P RIG HANDS ( SLOW MOVE DUE TO WEATHER CONDITIONS ) WAIT ON DAYLIGHT
10/08/00/0	0:00	- 0:00	6.00	RDMO	21	C	P		WAIT ON DAYLIGHT
12/28/2012		- 6:00 - 18:00	6.00 12.00	RDMO RDMO	21 01	В	P		SAFETY MEETING W JONES, CURTS CRANE & RIG CREWS ,RIG DOWN ROTARY TOOLS , FINISH MOVING RIG, RIG UP ROTARY TOOLS, & TRUCKS, 2 FORKLIFTS, 2 CRANES, 17 JONES HANDS, 3 CURTS CRANE HANDS, 12 H&P RIG HANDS, RIG IS 100% MOVED, 90% SET IN, 50% RIGGED UP, DERRICK IS ON FLOOR BUT NOT RAISED ( RIG MOVE SLOW DUE TO ICE & WEATHER)
	18:00	- 0:00	6.00	RDMO	21	C	P		WAIT ON DAYLIGHT
12/29/2012	0:00	- 6:00	6.00	RDMO	21	С	P		WAIT ON DAYLIGHT
	5:00	- 18:00	12.00	RDMO	01	В	P		RIG UP ROTARY TOOLS, RUN POWER TO SUB, RAISE DERRICK, POWER UP RIG FLOOR, SPOOL UP TUGGER CABLES, R/U STAND PIPE, SPOOL UP DRAWWORKS, UNDOCK BLOAKS & PIN TOP DRIVE TOGETHER, UNHOOK DRAG CHAIN & KEELY HOSE, CALIBRATE DRAWWORKS, P/U V-DOOR, RIG UP STEAM, PITS, CHOKE HOUSE, GLYCOL HEATER TO UPRIGHTS, WATER, AIR TRUCKS RELEASED & 09:30; CRANES RELEASED @ 10:30
	18:00	- 0:00	6.00	RDMO	01	В	P		THAW OUT RIG , THAW OUT FLARE LINES, GAS BUSTER LINES, FLOWLINE, STEAM LINES, STEAM HEATERS, WATER LINES, RIG UP MUD LINES, 80% RIGGED UP
12/30/2012	0:00	- 3:00	3,00	MIRU3	01	В	Р		RIG UP ROTARY TOOLS, THAW OUT FLARE LINES, FLOWLINE, STEAM HEATERS, R/U MUD LINES
	3:00	- 12:00	9.00	PRPSPD	14	A	Р		NIPPLE UP BOP, INSTALL RISER ON WELL HEAD, SET STACK, R/U CHOKE LINES, KOOMEY LINES, TURNBUCKLES, FILL LINE, KILL LINE, FLOWLINE
	12:00	- 17:00	5.00	PRPSPD	14	A	Р		NIPPLE UP BOP & THIRD PARTY EQUIPMENT, ORBIT VALVE, CHOKE LINE, BEARING PACK, THAW OUT BEARING PACK
		- 22.30	5,50	PRPSPD	15	A	P		SAFETY MEETING W. A-1 TESTING, R/U & TEST BOP, TIWVALVE, DART VALVE, PIPE RAMS, LOWER KELLY VALVE, 250 PSI F/5 MIN, 5000 PSI F/10 MIN
	22:30	- 0:00	1.50	PRPSPD	08	Α	Z		***RIG REPAIR*** TROUBLE SHOOT DRAW WORKS, CHANGE OUT VERSA VALVE
12/31/2012	0:00	- 1:30	1.50	PRPSPD	08	Α	Z		***RIG REPAIR*** TROUBLE SHOOT DRAW WORKS, CHANGE OUT VERSA VALVE

Vell: NBU 921-	22L4BS RED						Spud Date: 11	/13/2012	
roject: UTAH-I			Site: NBU	J 921-22L	PAD			Rig Name No: PROPETRO 12/12, H&P 318/318	
vent: DRILLIN	CONTRACTOR AND CONTRA		Start Dat	e: 10/30/3	2012			End Date: 1/11/2013	
	RKB @4,906.00usft (a	above Mean S	17-11-11-11-11-11-11-11-11-11-11-11-11-1	1	the state of the s	9/S/21/E/2	/0/0/26/PM/S/1	372/N/0/675/0/0	
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
	1:30 - 8:00	6,50	PRPSPD	15	A	P	10019	TEST BOP, BLIND RAMS, CHOKE MANIFOLD, CHOKE LINE, 250 F/5 MIN, 5000 F/10 MIN, ANNULAR 250 F/ 5 MIN, 2500 F/10 MIN, (1 HR TO PULL FROZEN TEST PLUG OUT OF WELL HEAD, & REINSTALL, TEST CASIN 1500 F/30 MIN, SWACO CHOKE MANIFOLD & ORBIT VALVE	
	8:00 - 10:00	2.00	PRPSPD	08	A	Z		***RIG REPAIR*** TROUBLE SHOOT DRAW WORKS, REMOVED VERSA VALVE CLEAN & REINSTALL	
	10:00 - 11:00 11:00 - 11:30	0.50	PRPSPD	15 14	A B	P		FINISH TESTING INSIDE BOP 250 F/ 5 MIN, 5000 F/ 10 MIN, R/D TESTER INSTALL WEAR BUSHING	
	11:30 - 13:30	2.00	PRPSPD	01	В	P		FINISH RIGGING UP GASBUSTER, IGNITER, MOUSE HOLE	
	13:30 - 15:00	1.60	PRPSPD	06	A	Р		SET OUT BHA , PICK UP MOTOR	
	15:00 - 17:00	2.00	PRPSPD	08	В	Z		*** DOWN TIME***UNTHAW VALVES ON FLOWLINE & CLOSE, PUMP FLUID THROUGH FLOWLINE CHECK FOR LEAKS, TIGHTEN UP MUD LINE, BLOW DOWN MUD LINE & TOP DRIVE	
	17:00 - 0:00	7.00	PRPSPD	06	A	P		PICK UP SMITH MDI 616 BIT, SDI .23RPG/1.5 BEND MOTOR, DIRECTIONAL TOOLS, ORIENT MWD,30 JTS HWDP & DRILL PIPE @ 2246	
1/1/2013	0:00 - 1:30	1.50	PRPSPD	06	Α	Р		TALLY & FINISH PICKING UP DRILL PIPE TO 1740	
	1:30 - 3:30	2.00	DRLPRV	02	F	Р		DRILL CEMENT & FLOAT EQUIPMENT F/ 2740' TO 2690'	
	3:30 - 17:00	13.50	DRLPRV	02	В	P		DRILL F/ 2890' TO 4331'  ROP= 1441' @ 106.7' HR  WOB= 24/28K  RPM~ MM /TD= 124/80 ~ TOTAL =184  GPM / SPM=540/120  SPP~0N/OFF = 2050/1600  TORQUE~ ON/OFF= 5/3  PU/SO/RT- 120/105/114  MW= 9.7 / VISC= 37  NOV (FROZE UP)  SWACO ONLINE FULL OPEN ON GUT LINE  SLIDE= 63' IN 1.25 HRS = 50.4' HR  BIT POSITION @ 4331' .9' N , 2.4' EAST OF TARGET  CENTER	
	17:00 - 17:30	0.50	DRLPRV	07	Α	Р		RIG SERVICE	
	17:30 - 0:00	6,50	DRLPRV	02	В	P		DRILL F/ 4331' TO 4943'  ROP= 612' @ 94.1' HR  WOB= 24/26K  RPM~ MM /TD= 124/60 ~ TOTAL =184  GPM / SPM=540/120  SPP~0N/OFF = 2100/1700  TORQUE~ ON/OFF= 6/3  PU/SO/RT- 132/115/125  MW= 9.1 / VISC= 33  NOV DEWATERING  SWACO ONLINE FULL OPEN ON GUT LINE  SLIDE= 49' IN 1.24 HRS = 39.5' HR  BIT POSITION @ 5086' 13' N 17' WEST OF TARGET  CENTER	

						KIES RE Summa	GION ry Report				
Well: NBU 921-	22L4BS RED						Spud Date: 11	/13/2012			
Project: UTAH-I	UINTAH		Site: NBU	J 921-22L	PAD			Rig Name No: PROPETRO 12/12, H&P 318/318			
Event: DRILLIN	G		Start Date	e: 10/30/2012 End Date: 1/11/2013							
	RKB @4,906.00usft (a	bove Mean S		UWI: NW/SW/0/9/S/21/E/22/0/0/26/PM/S/1672/W/0/675/0/0							
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
1/2/2013	6:00 - 12:00	12.00	DRLPRV	02	В	P		DRILL F/ 4943' T/ 6110'  ROP= 1167' @ 97 FPH  WOB= 24/26K  RPM~ MM /TD= 124/60 ~ TOTAL =184  GPM / SPM=540/120  SPP~0N/OFF = 1900/ 1500  TORQUE~ ON/OFF= 7500/ 4000  PU/SO/RT- 150/105/125  MW= 9.0 / VISC= 34  NOV DEWATERING  SWACO ONLINE FULL OPEN ON GUT LINE  SLIDE= 32' / 1 HOUR  BIT POSITION 15.4' NORTH & 15.4' WEST OF  TARGET CENTER  NO LOSSES			
	12:00 - 17:00	5.00	DRLPRV	02	В	P		DRILL F/8110'- T/6596'  ROP= 486'			
	17:00 - 17:30	0.50	DRLPRV	07	Α	P		SERVICE RIG & EQUIPMENT			
	17:30 - 0:00	6.50	DRLPRV	02	В	P		DRILL F/6596'-T/7080' ROP= 484' @ 74.5 FPH WOB= 24/26K RPM~ MM /TD= 124/60 ~ TOTAL =184 GPM / SPM=540/120 SPP~0N/OFF = 2350/1850 TORQUE~ ON/OFF= 8000/5000 PU/SO/RT-172/140/158 MW= 9.4 / VISC= 34 NOV DEWATERING~2 HOURS ON / 2 HOURS CONVENTIONAL SWACO ONLINE FULL OPEN ON GUT LINE TOTAL SLIDE LAST 24 HOURS= 82'- 2.75 HOURS 3.84% BIT POSITION 12.55' NORTH & 10.5' WEST OF TARGET CENTER NO LOSSES			

				Opera	tion S	umma	ry Report	
							Spud Date: 11	/43/2012
Vell: NBU 921-			Cito: NDI	J 921-22L	DAD		Spud Date. 11	Rig Name No: PROPETRO 12/12, H&P 318/318
Project: UTAH-I						1		
event; DRILLIN				e; 10/30/2		US ION IE ION	nin merpini eri	End Date: 1/11/2013 672/W/0/675/0/0
.evel)	RKB @4,906.00usft (al						and the second of the second o	
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/3/2013	0:00 - 4:30	4,50	DRLPRV	02	А	P		DRILL F/7080'- T/ 7295' ROP= 215' @ 48 FPH WOB= 24/26K RPM~ MM /TD= 124/60 ~ TOTAL =184 GPM / SPM=540/120 SPP~0N/OFF = 2350/1850 TORQUE~ ON/OFF= 8000/5000 PU/SO/RT-172/140/158 MW= 9.4 / VISC= 34 NOV DEWATERING~2 HOURS ON / 2 HOURS CONVENTIONAL SWACO ONLINE FULL OPEN ON GUT LINE TOTAL SLIDE LAST 24 HOURS= 82'- 2.75 HOURS-3.84% BIT POSITION 12.55' NORTH & 10.5' WEST OF TARGET CENTER LOSSES= 25 BBL'S TO SEEPAGE
	4:30 - 10:30	6.00	DRLPRV	00	^	2		*** RIG FAILURE ( BLACK OUT) TROUBLE SHOOT /// WAIT ON MECHANIC & ELECTRICIAN /// REPLACE VERSA VALVE /// REPLACE BROKE VERSA-VALVE & RE-CALIBRATE DRAWWORKS
	10:30 - 17:00 17:00 - 17:30	6.50	DRLPRV	02	В	P		DRILL 7-7/8" PRODUCTION HOLE F/ 7295'-T/ 7632'  ROP= 337' ® 52 FPH  WOB= 24/26K  RPM~ MM /TD= 124/60 ~ TOTAL =184  GPM / SPM=540/120  SPP~0N/OFF = 2250/1800  TORQUE~ ON/OFF= 8000/5000  PU/SO/RT- 187/142/168  MW= 9.2 / VISC= 35  NOV DEWATERING~2 HOURS ON / 2 HOURS  CONVENTIONAL  SWACO ONLINE FULL OPEN ON GUT LINE  LOSSES= 30 BBLS TO SEEPAGE  SERVICE RIG & EQUIPMENT
	17:00 - 17:30	0.50	DRLPRV	07				
	17:30 - 0:00	6.50	DRLPRV	02	В	P.		DRILL F/ 7632'-T/ 7880'  ROP= 248' @ 38 FPH  WOB= 24/26K  RPM~ MM /TD= 124/45 ~ TOTAL =184  GPM / SPM= 450/100  SPP~0N/OFF = 1700/1350  TORQUE~ ON/OFF= 7000/5000  PU/SO/RT- 190/150/172  MW= 9.3 / VISC= 35  NOV DEWATERING~2 HOURS ON / 2 HOURS  CONVENTIONAL  SWACO ONLINE FULL OPEN ON GUT LINE  TOTAL SLIDE LAST 24 HOURS=17'83 HOURS - 2.13%  BIT POSITION 11.15' NORTH & 10.9' WEST OF  TARGET CENTER

						KIES RE Jumma	ry Report		
Well: NBU 921-	22L4BS RED						Spud Date: 11	1/13/2012	
Project: UTAH-	UINTAH		Site: NBU	921-22L	PAD			Rig Name No: PROPETRO 12/12, H&P 318/318	
Event: DRILLIN	G		Start Date	e: 10/30/2	012			End Date: 1/11/2013	
Active Datum: F	RKB @4,906,00usft (at	oove Mean S		1		VS/21/E/2	2/0/0/26/PM/S/1	672/W/0/675/0/0	
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
1/4/2013	0:00 - 6:00	6.00	DRLPRV	02	В	Р		DRILL 7-7/8" PROD. HOLE F/ 7880" - T/ 8074"  ROP= 194" @ 32 FPH  WOB= 24/28K  RPM~ MM /TD= 124/60 ~ TOTAL =184  GPM / SPM= 540/120  SPP~0N/OFF =2250/ 1850  TORQUE~ ON/OFF= 8000/5000  PU/SO/RT- 197/151/175  MW= 9.3 / VISC= 35  NOV DEWATERING~2 HOURS ON / 2 HOURS  CONVENTIONAL  SWACO ONLINE FULL OPEN ON GUT LINE  BIT POSITION 8.75" NORTH & 11" WEST OF TARGET  CENTER  NO LOSSES	
	6:00 - 12:00	6.00	DRLPRV	02	В	P		DRILL 7-7/8" PROD. HOLE F/ 8074'- T/ 8423' ROP= 349' @ 58.2 FPH WOB= 24/26K RPM~ MM /TD= 124/60 ~ TOTAL =184 GPM / SPM= 640/120 SPP~ON/OFF = 2650/2200 TORQUE~ ON/OFF= 9500/5500 PU/SO/RT- 200/148/176 MW= 9.5 / VISC= 37 NOV DEWATERING~2 HOURS ON / 2 HOURS CONVENTIONAL SWACO ONLINE FULL OPEN ON GUT LINE NO LOSSES	
	12:00 - 17:30	5.50	DRLPRV	02	В	P		DRILL 7-7/8" PROD. HOLE F/ 8423'-T/ 8672'  ROP= 249' @ 45.3 FPH  WOB= 24/26K  RPM~ MM /TD= 124/60 ~ TOTAL =184  GPM / SPM= 540/120  SPP~0N/OFF = 2650/2200  TORQUE~ ON/OFF= 9500/5500  PU/SO/RT- 200/148/176  MW= 9.5 / VISC= 37  NOV DEWATERING~2 HOURS ON / 2 HOURS  CONVENTIONAL  SWACO ONLINE FULL OPEN ON GUT LINE	
	17:30 - 18:00	0.50	DRLPRV	07	A	Р		NO LOSSES SERVICE RIG & EQUIPMENT	

RECEIVED: Apr. 26, 2013

							KIES RE umma	ry Report		
/ell: NBU 921-	22L4BS R	FD					DELMIS	Spud Date: 11	/13/2012	
roject: UTAH-I				Site: NBL	921-22	. PAD			Rig Name No: PROPETRO 12/12, H&P 318/318	
vent: DRILLIN	G			Start Dat	e: 10/30/3	2012	T		End Date: 1/11/2013	
ctive Datum: F		06,00usft (a	bove Mean S				/S/21/E/2	2/0/0/26/PM/S/1	672/W/0/675/0/0	
evel)	-									
Date	100	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
		- 23:00	1.00	DRLPRV	02	В	P		DRILL 7-7/8" PROD, HOLE F/ 8672'-T/ 8954'  ROP= 282' @ 56.4 FPH  WOB= 24/26K  RPM~ MM /TD= 124/60 ~ TOTAL =184  GPM / SPM= 540/120  SPP~0N/OFF = 2400/2100  TORQUE~ ON/OFF= 9000/6000  PU/SO/RT- 207/165/184  MW= 9.5 / VISC= 36  NOV DEWATERING~2 HOURS ON / 2 HOURS  CONVENTIONAL  SWACO ONLINE FULL OPEN ON GUT LINE  BIT POSITION 8.4' NORTH & 10.6' WEST OF TARGET  CENTER  SLIDE LAST24 HOURS= 62' / 4.25 HOURS / 5.75%  NO LOSSES  ***TOP DRIVE QUITE /// TROUBLE SHOOT PROBLEM	
1/5/2013	0:00	- 5:00	5,00	DRLPRV	08	В	Z		*** TROUBLE SHOOT TOP DRIVE PROBLEMS	
	5:00	- 19:00	14.00	DRLPRV	08	В	Z		*** REPLACE TOP DRIVE - DISPLACE FLOWZAN MUD W/ HEAVY MUD TO TRIP OUT TO SHOE /// THAWVALVES & HOSES ON UP RIGHT STORAGE TANKS /// PROBLEMS GETTING TRANSFER PUMP TO START - FUEL GELING /// SUCTION VALVE ON PREMIX PLUGGED /// BUILD VOLUME & CONDITION MUD TO 11.8 WT /// CHECK FOR FLOW- NO FLOW /// PUMP SLUG /// BLOWOUT MUD LINES	
	19:00	- 21:00	2.00	DRLPRV	08	В	Z		***CUT TOP DRIVE LOOSE FROM STRING & AND	
	21:00	- 23:30	2,50	DRLPRV	08	В	Z		LAY DOWN 1 JT OF DRILL PIPE  *** TRIP OUT OF HOLE TO 8-5/8" CSG SHOE TO	
	23130	0.00	0.50	DDI DOI I	00	D	-		CHANGE OUT TOP DRIVE	
1/6/2013	23:30	- 0:00	0,50 3.00	DRLPRV	08	B	Z Z		*** WORK TIGHT HOLE @ 4870'	
1/0/2013		- 6:30	3.50	DRLPRV	08	В	Z		WELL WITH DRILL PIPE SWEDGE	
			3,00	PATELLA	uo		-		***WORK TIGHT HOLE @ 4870' /// CIRCULATING WELL WITH DRILL PIPE SWEDGE /// WAIT ON SURFACE JAR	
	6;30	- 11:00	4.50	DRLPRV	80	В	Z		***STRAP & PICK UP SURFACE JAR /// SCORPION WOULD NOT WORK- HAD TO GET H&P 298'S SCORPION	
	11:00	- 12:30	1.50	DRLPRV	80	В	Z		***JAR DOWN ON FISH, CAME LOOSE FIRST HIT AFTER GETTING JARS WARMED UP & ADJUSTED	
	12:30	- 13:00	0.50	DRLPRV	08	В	Z		***LAY DOWN JARS & GET HOLE CIRCULATING	
	13:00	- 0:00	11.00	DRLPRV	08	В	Z		***CHANGE OUT TOP DRIVE	
1/7/2013	0:00	- 12;30	12,50	DRLPRV	08	В	Z		*** INSTALL NEW TOP DRIVE & FUNCTION TEST	
	12:30	- 14:00	1.50	DRLPRV	08	В	Z		*** TOOH /// BACK REAM F/ 4970" T/ 4500' THROUGH TIGHT HOLE	
		- 20:00	6.00	DRLPRV	08	В	Z		*** TOOH /// LAY DOWN BIT #1, MUD MOTOR & MWD	
		- 20:30	0.50	DRLPRV	08	В	Z		SERVICE RIG & EQUIPMENT	
	20:30	- 23:00	2.50	DRLPRV	80	В	Z		*** WORK ON TOP DRIVE #/ CHANGE OUT FLOAT VALVE FOR LINK TILT SYSTEM	
		- 0:00	1.00	DRLPRV	08	В	Z		*** PICK UP BHA #2	
1/8/2013	0:00	- 2:00	2.00	DRLPRV	80	В	Z		*** FINISH PIKING UP BHA# 2 & TIH TO 1200'	

							KIES RE	gion ry Report		
Well: NBU 921	-221 ABS B	ED						Spud Date: 11	1/13/2012	
Project: UTAH				Site: NBU	921-221	PAD		opus 00101 11	Rig Name No: PROPETRO 12/12, H&P 318/318	
						N. Calledon	1		End Date: 1/11/2013	
Event: DRILLI	10/09/03	an an		Start Date			19/21/E/2	ominios/PM/S/4	1872/N/0/675/0/0	
Active Datum: Level)	KKB @4,9	в) лешии. оо	pove Mean S	ea	OVM. IV	rwaw.us	OIZ I/LIZ	ETOVOTE GIT INFOTT	n zrawowo stoto	
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
SILLI		- 5:00	3.00	DRLPRV	08	В	Z		*** TROUBLE SHOOT HYDRAULIC PROBLEMS WITH TOP DRIVE & REPAIR	
	5:00	- 9:00	4.00	DRLPRV	08	В	Z		*** TIH WITH BHA #2 // REAM TIGHT HOLE F/ 4141'- T/ 4450' & F/ 4772- T/ 4900'	
	9:00	- 11:00	2.00	DRLPRV	08	В	Z		*** TIH F/ 4900'- T/ 8871'	
		- 13:00	2.00	DRLPRV	08	В	Z		*** REAM F/ 8871'- T/ 8954' (WORK ON PUMPS)	
	13,00	- 16:00	3.00	DRLPRV	02	В	P		DRILL ( ROT/SLIDE) 7.875" PROD. HOLE F/ 8954'- 9049' ROP= 95'	
	16:00	- 16:30	0.50	DRLPRV	02	В	P		SERVICE RIG & EQUIPMENT	
		- 17:30	1,00	DRLPRV	02	В	P		DRILL (ROT/SLIDE) 7.875" PROD. HOLE F/ 9049'- 9116'  ROP= 67' @ 67 FPH  WO8= 24/27K  RPM~ MM /TD= 98 / 55  GPM / SPM= 428 / 95  SPP~0N/OFF = 2250 / 2000  TORQUE~ ON/OFF 7700/5000  PU/SO/RT= 200/160/184  MW= 12.0 / 38 VISC=  NOV OF LINE  SWACO OFF LINE  LOST 75% RETURNS (80 BBLS)	
	17:30	- 18:00	0.50	DRLPRV	22	G	X		*** LOST 75% RETURNS PUMP 2 LCM PILLS (30 BBLS @ 12%) TO CONTROLL LOSSES	
	18:00	- 20:00	2.00	DRLPRV	02	В	P		DRILL ( ROT/SLIDE) 7.875" PROD, HOLE F/ 9116" - T/ 9151"  ROP= 35 '  17.5 FPH  WOB= 22  RPM~ MM /TD= 93 / 50  GPM / SPM= 405 / 90  SPP~0N/OFF = 2200 / 1900  TORQUE~ ON/OFF 7000 /5000  PU/SO/RT= 200/160/184  MW= 12.0 / VISC= 39 W/ LCM SWEEPS  NOV OFF LINE  SWACO OFF LINE  MWD ISSUES	
	20:00	- 21:00	1.00	DRLPRV	22	L	Z		*** TROUBLE SHOOT MWD ## TOOL FAILED ## CALLED IN & DECISION MADE TO DRILL AHEAD TO TD.	

				Opera	tion S	umma	ry Report		
Well: NBU 921-2	22L4BS RED						Spud Date: 11	/13/2012	
roject: UTAH-L			Site: NBU	921-22L	PAD			Rig Name No: PROPETRO 12/12, H&P 318/318 End Date: 1/11/2013	
vent DRILLING	4.7		Start Date	e: 10/30/2	012				
STATE OF THE PARTY		isft (above Mean S		1		VS/21/E/2	2/0/0/26/PM/S/1	72/W/0/675/0/0	
Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation	
	21:00 - 0:		DRLPRV	02	Code	P	(usft)	DRILL (ROT/SLIDE) 7.875" PROD. HOLE F/ 9151 - T/	
								9310' ROP= 159' @ 53 FPH WOB= 24/26K RPM~ MM /TD= 103/60 ~ TOTAL163 GPM / SPM=450/100 SPP~0N/OFF =2700/2300 TORQUE~ ON/OFF= 8000/7000 PU/SO/RT= 210/172/185 MW= 11.9 / VISC=40 ~ LCM SWEEPS NOV OFF LINE SWACO OFF LINE BIT POSITION 11.25' WEST & 7.11' NORTH OF CENTER TARGET ?	
1/9/2013	0:00 - 6:	00 6.00	DRLPRV	02	В	Р		LOST 35 BBL'S  DRILL ( ROT/SLIDE) 7.875" PROD. HOLE F/ 9310' - T/ 9556'  ROP= 246 ' @ 41 FPH	
								WOB= 24/26K  RPM~ MM /TD=103/60 ~ TOTAL= 163  GPM / SPM=450/100  SPP~0N/OFF =2700/2300  TORQUE~ ON/OFF=8000/7000  PU/SO/RT=211/172/187  MW= 11.9 / VISC= 41 ~ LCM SWEEPS  NOV OFF LINE	
	8:00 - 16	:30 10,50	DRLPRV	02	В	P		SWACO OFF LINE  DRILL ( ROT/SLIDE) 7.875* PROD. HOLE F/ 9558' - T/ 10054'  ROP= 498' @ 47.4 FPH  WOB= 24/26K  RPM~ MM /TD= 103/60 ~ TOTAL= 163  GPM / SPM= 450/100	
								SPP-ON/OFF = 28002250 TORQUE- ON/OFF= 8000/7000 PU/SO/RT=216/175/192 MW= 12.0 / VISC=40 ~ LCM SWEEPS NOV OFF LINE SWACO OFF LINE	
	16:30 - 23	:30 7,00	DRLPRV	05	В	P		CIRCULSTE & CONDITION HOLE/MUD FOR WIPER TRIP // CHECK FOR FLOW-WT 8.9 WELL FLOWING /// RAISE WT TO 12.2 ~ CHECK FOR FLOW- WELL FLOWING /// RAISE WT TO 12.4 ~ CHECK FOR FLOW- WELL FLOWING /// RAISE WT TO 12.5 + ~	
				5230				CHECK FOR FLOW-NO FLOW	
	23:30 - 0		DRLPRV	06	E	Р		WIPER TRIP 7800'	
1/10/2013	0:00 - 3 3:30 - 5		DRLPRV DRLPRV	06 05	E A	P		WIPER TRIP (WASH F/ 9800'- T/ 10054') CIRCULATE & CONDITION FOR 4.5" CSG /// RAISE	
								MUD WT TO 12.7+ FOR TRIP MARGIN	
	5:00 - 5		DRLPRV	05	J	P		FLOW CHECK - NO FLOW	
	5:30 - 14		DRLPRV		A	P		TOOH TO RUN 4.5" CSG /// LAY DOWN DIR, TOOLS	
	14:30 - 15		DRLPRV	14	В	P		PULL WEAR BUSHING	
	15:00 - 17 17:00 - 17		CSGPRO		A	Z		*** LEVEL MAST	
			CSGPRO		A	P		SERVICE RIG & EQUIPMENT	

							KIES RE	GION ry Report					
Well: NBU 921-:	22L4BS R	RED						Spud Date: 11	/13/2012				
Project: UTAH-U				Site: NBU	921-22L	PAD			Rig Name No: PROPETRO 12/12, H&P 318/318				
Event: DRILLIN				Start Date	* 40/20/5	0012			End Date: 1/11/2013				
						UWI: NW/SW/0/9/S/21/E/22/0/0/26/PM/S/1672/W/0/675/0/0							
Date	Time Duration Start-End (hr)			Phase	Code	Sub Code	P/U	MD From (usft)	Operation				
	17:30	- 19:00	1,50	CSGPRO	12	A	Р		PJSM /// RIG UP KIMZEY CSG CREW				
	19;00	- 20:30	1.50	CSGPRO	08	В	Z		***ADJUST CLAMPS FOR LINK TILT CYLINDERS ON TOP DRIVE				
	20:30	- 0:00	3,50	CSGPRO	12	С	P		RUN 122 JT'S 4,5", 11.6#, HCP-110, LT&C CSG & 119 JT'S, 4,5", 11.6#, I-80, DQX CSG // SHOE SET @ 10039', TOP OF FLOAT COLLAR @ 9996', TOP OFF MV MARKER @ 7812'				
1/11/2013	0:00	- 6:30	6,50	CSGPRO	12	С	Р		RUN 122 JTS 4.5", 11.6#, HCP-110, LT&C CSG & 119 JTS, 4.5", 11.6#, I-80, DQX CSG // SHOE SET @ 10039', TOP OF FLOAT COLLAR @ 9996', TOP OFF MV MARKER @ 7812' ( NOTE; AIR COMPRESSOR FOR RIG KEPT GOING DOWN CAUSING EXCESIVE CSG RUN TIME)				
	6:30	- 7:00	0.50	CSGPRO	14	В	P		LAND 4.5" CSG				
	7:00	- 8:30	1.50	CSGPRO	05	A	P		CIRCULATE 4.5" CSG @ 10039' /// RIG DOWN CSG CREW /// PJSM & RIG UP BJ CMT LINES TO FLOOR				
	8:30	- 13:00	4.50	CSGPRO	12	E	P		PJSM WITH BJ CMT CREW /// TEST LINES TO 5000 PSI /// DROP BOTTOM PLUG & PUMP 25 BBL SPACER /// LEAD = 635 sx (201 BBL'S) PREMIUM LITE II CMT @ 1.77 Cu.ft/sack YIELD & 13ppg WT /// TAIL= 1145 sx (271 BBL'S) 50/50 POZ CMT @ 1.33 Cu.ft./sack YEILD & 14.3 ppg WT. /// DROP TOP PLUG & DISPLACE W/ 158 BBL'S CLAYCARE /// PLUG DOWN @ 11:38 01/11/2013 /// BUMP PLUG W/ 3699 PSI /// FINAL LIFT =2794 PSI /// CHECK FLOATS ~ HELD W/ 2 BBLS BACK /// 100% RETURNS THRU OUT JOB /// 10 BBL'S CMT TO SURFACE /// ESTIMATED TOP OF TAIL @ 4465'				
	13:00	- 14:00	1.00	CSGPRO	14	В	P		SET PACK OFF & LAY DOWN LANDING JT.				
	14:00	- 16;00	2.00	CSGPRO	14	A	Р		NIPPLE DOWN BOPE /// RELEASE RIG @ 16:00 01/11/2013 TO NBU 921-22K2DS				

Well Name

Address

1.2

General

1.

Spud Date

3

General

1.3

1.4

Start Date

Project

Date

2.1

Intervals

7

2.1 Perforated Interval (Continued)

OpenWells

April 10, 2013 at 2:47 pm

Date	3/18/2013 WAS	3/18/2013 WAS	63	3/18/2013 WAS	m	m	0	m	m	3/18/2013 WAS	3/18/2013 JAS	3/18/2013 WAS	m	m	3/18/2013 WA:	m	3/18/2013 WAS	3/18/2013 WASATCH/	3/18/2013 WASATCH/ 12:00AM	3/18/2013 WA:	3/18/2013 WASATCH/
Formation/ Reservoir	WASATCH/	JASAICH/	WASATCH/	WASATCH/	WASATCH/	WASATCH/	WASATCH/	WASATCH/	SATCH/	SATCH/	WASATCH/	SATCH/									
CCL@																					
S (list)																					
MD Top (usft)	6,588.0	6,734.0	6,797.0	6,864.0	6,891.0	0'006'9	6,995.0	7,025,0	7,110.0	7,176.0	7,190.0	7,264.0	7,300.0	7,357.0	7,383.0	7,412.0	7,463.0	7,470,0	7,523.0	7,570.0	7,584.0
MD Base (usft)	6,590.0	6,736.0	6,798.0	6,866.0	6,892.0	6,901.0	6,996.0	7,026.0	7,112.0	7,177.0	7,191.0	7,265.0	7,301.0	7,358.0	7,384.0	7,413.0	7,464.0	7,471.0	7,524.0	7,571.0	7,585.0
Shot Density (shot/ft)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Misfires/ Add. Shot																					
Diamete r (in)	8	0.360 EXP/	0.360 EXP	0.360 EXP/	0.360 EXP/	0.360 EXP	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/					
Carr Type / Stage No	EXP/	EXP/	EXP/																		
Size Size	3.375	3,375	3.375	3.375	3.375	3.375	3.375	3.375	3,375	3.375	3.375	3.375	3.375	3.375	3.375	3.375	3.375	3.375	3.375	3.375	3.375
Phasing ©	120,00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
Charge Desc /Charge Manufacturer																					
Charge Weight (gram)	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
Reason	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO																		
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US ROCKIES REGION

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8,338.0 8,389.0 3.00 0.360 EXP/ 3.375 120.00 8,368.0 8,369.0 3.00 0.360 EXP/ 3.375 120.00	8,318.0 3.00 0.360 EXP/ 3.375	DATE OF THE PROPERTY OF THE PR	8.252.0 8.253.0 3.00 0.360 EXP/ 3.375 120.00	8,239.0 8,240.0 3.00 0.360 EXP/ 3.375 120.00	8,204,0 8,205.0 3.00 0.360 EXP/ 3,375 120.00	8,178.0 3.00 0.360 EXP	8,154.0 3.00 0.360 EXP	8,141.0 3.00 0.360 EXP/ 3.375	8,121.0 3.00 0.360 EXP/ 3.375	8,059.0 3,00 0,360 EXP/ 3,375	8,068,0 8,069,0 3,00 0,360 EXP/ 3,375 120,00	8,034.0 8,035.0 3.00 0.360 EXP/ 3.375 120.00	3.00 0.360 EXP/ 3.375	7,000.0 2,00 0.00 0.00 0.00 7.00 7.00 7.00 7.00 7	7,799,0 7,800.0 3.00 0.360 EXP/ 3.375 120.00	7,783.0 7,784.0 3.00 0.360 EXP/ 3.375 120.00	7,758.0 3.00 0.360 EAP 3.375	7,757.0 7,758.0 3.00 0,360 EXP/ 3.375 120.00	2000 0000 0000 0000 0000 0000 0000 000	7,748,0 7,749,0 3.00 0.360 EXP/ 3.375 120.00	STORY OF THE PROPERTY OF THE P	7,640,0 7,641.0 3.00 0,360 EXP/ 3,375 120.00	7,604,0 3,00 0,300 EAP! 3,373	(usft) Density Add, Shot (in) (in) (in)
3.00 0.360 EXP/ 3.375 3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.375	100 C	3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.375	3.00 0.360 EAP! 5.373	3.00 0.380 EXP/ 5.375	3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.3/5	5.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	3.00 0.360 EXP/ 3.375	3.00 0.360 EXP/ 3.375	3.00 0.360 EAP! 3.375	3.00 0.360 EXP/ 3.375	STORY CONTRACTOR OF THE STORY	3.00 0.360 EXP/ 3.375	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	3.00 0,360 EXP/ 3,375	S.00 U.Sou EAR!	Short Mistress Diamete Carr yperstage to Carr Fridaning Carr (in) (in) (in)
0.360 EXP/ 3.375 0.360 EXP/ 3.375	0.360 EXP/ 3.375	310 c	0.360 EXP/ 3.375	0.360 EXP/ 3.375	0.360 EXP/ 3.375	0.360 EXP	0.350 EXP 5.375	0.360 EXP/ 3.375	0.360 EXP/ 3.375	0.360 EXP/ 5.375	0.360 EXP/ 3.375	0.360 EXP/ 3.375	0.360 EXP/ 3.3/5	0.000 CAC 0.000 0 3 375	0.360 EXP/ 3.375	0.360 EXP/ 3.375	0.360 EAP 5.375	0,360 EXP/ 3,375	Stee o	0.360 EXP/ 3.375	2000 CV3 0200 CV3 020	0,360 EXP/ 3,375	U.SOU EAT!	Add, Shot (in) (in) (in)
3.375	3.375	0 0	3.375	3.375	3.375	6/6/6	3,3/5	3.375	33/5	5.3/5	3.375	3.375	3,3/5	3375	3.375	3.375	5,5,5	3.375	STO 6	3.375	926.6	3.375	0.0.0	Size (n)
															1									C C
120.00	120.00	0000	120.00	120.00	120.00	0.021	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	0000	120.00	130.00	120.00	20,001	
							2						-1											- Ter
23.00 PRODUCTIO N Z3.00 PRODUCTIO	Z3.00 PRODUCIIO	N Off Off Off Off Off Off Off Off Off Off	23.00 PRODUCTIO	23.00 PRODUCTIO	Z3.00 PRODUCTIO N	N N OHOUGON ON O	N N 23.00 PRODUCTIO	N N	23.00 PRODUCINO	N N 23 OD PRODUCTIO	23.00 PRODUCTIO	23.00 PRODUCTIO N	ZS:00 PRODUC	N 23.00 PRODUCTIO	23.00 PRODUCTIO	23.00 PRODUCTIO	23.00 PROD	23,00 PRODUCTIO N	N N	23.00 PRODUCTIO	N 23 00 PROF	23.00 PRODUCTIO	N N OTOTIONALICITO	Weight (gram)
DO PRODUCTIO	N N N N N N N N N N N N N N N N N N N	N OITOINOBOOM	DO PRODUCTIO	DO PRODUCTIO	N N	N N OFFICIAL OFFICE AND ADDRESS OF THE PROPERTY OF THE PROPERT	N N OF PRODUCTIO	N N N N N N N N N N N N N N N N N N N	N N N N N N N N N N N N N N N N N N N	N N PRODUCTIO	N DO PRODUCTI	DO PRODUCI	N N	N 30 PRODUC	N PROD	N N	N N O PROD	N PROI	N	N PRO	N OF COL	N N	N N N N N N N N N N N N N N N N N N N	

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April 10, 2013 at 2:47 pm

US ROCKIES REGION

Perforated Interval (Continued)

Misrun																					
	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 PRODUCTIO N	23.00 РКОDUСТЮ N	23.00 PRODUCTIO N	23,00 PRODUCTIO N	23.00 PRODUCTIO N									
Charge Weight (gram)	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
Charge Desc /Charge Manufacturer																					
Phasing (*)	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
Size (in)	3.375	3.375	3.375	3,375	3.375	3.375	3.375	3.375	3,375	3,375	3.375	3.375	3.375	3.375	3,375	3.375	3.375	3.375	3,375	3.375	3,375
Carr Type /Stage No	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/	0.360 EXP/				
Diamete r (in)	0.360	0,36(	0.360	0.38	0.36(	0.38(	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	96.0	0.36	0.36	0.36	0.36	0.36	96.0
Misfires/ Add. Shot																					المراد
Shot Density (shot/ft)	3.00	3.00	3.00	3.00	3,00	3,00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
MD Blaso (usft)	8,540.0	8,601.0	8,609.0	8,796.0	8,840.0	8,864.0	8,891.0	8,915.0	8,989.0	9,008.0	9,024.0	9,057.0	9,071.0	9,110.0	9,134.0	9,151.0	9,168.0	9,179.0	9,235.0	9,248.0	9,257.0
MD Top (usft)	8,539.0	0,000,0	8,508.0	8,794.0	8,838.0	8,862.0	8,890.0	8,914.0	6,988.0	0.700,6	9,023.0	0'990'6	0.070.6	9,109.0	9,133.0	9,150.0	9,167.0	9,178.0	9,234.0	9,247.0	9,256.0
S (IIST)	(Non)													I							
CCL@																					
Formation/ Reservoir	3/18/2013 MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/	MESAVERDE/
Date	3/18/2013	60	m	m	3/18/2013   12:00/4M	m	60	60	65	m	m	m	m	60	0	60	m	m	3/18/2013	00	m

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OpenWells

**US ROCKIES REGION** 

2.1 Perforated Interval (Continued)

Formation/ Reservoir	(net)	CCL-T S (usff)	-		Shot Density (shot/ft)	Misfires/ Add, Shot	Diamete (	Carr Type /Stage No	Carr Size (in)	Phasing (*)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
MESAVERDE/			9,292.0	9,283.0	3.00		0.360 EXP/	PI	3.375	120,00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9.329.0	9,330.0	3.00		0.360 EXP		3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,364.0	9,365.0	3.00		0.360 EXP/	<i>PI</i>	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,395.0	9,396.0	3.00		0.360 EXP/	.P/	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,446.0	9,447.0	3.00		0.360 EXP/	<i>16</i> .	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,461.0	9,462.0	3.00		0.360 EXP/	P/	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,487.0	9,488.0	3.00		0.360 EXP/	<b></b>	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,511.0	9,512.0	3.00		0.360 EXP/	(P)	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,535.0	9,536.0	3.00		0.360 EXP/	Æ/	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,566.0	9,567.0	3.00		0.360 EXP/	/A)	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,585.0	9,586.0	3.00		0.360 EXP/	P/	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,604.0	9,605.0	3.00		0.360 EXP/	/d)	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,616.0	9,617.0	3.00		0.360 EXP/	<i>(</i> 9 <i>)</i>	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,637.0	9,638.0	3.00		0.360 EXP/	<i>(</i> <del>0</del> )	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,688.0	9,689.0	3.00		0.360 EXP/	Æ,	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,715.0	9,716.0	3.00		0.360 EXP/	/J	3.375	120.00		23.00	23.00 PRODUCTIO N	
MESAVERDE/			9,776.0	9,777.0	3.00		0.360 EXP/	(b)	3.375	120.00		23.00	23.00 PRODUCTIO N	

Plots

April 10, 2013 at 2:47 pm

					3,550		KIES RE umma	GION ry Report	
Well: NBU 921-	22L4BS F	RED						Spud Date: 11/	/13/2012
Project: UTAH-L	UINTAH			Site: NBU	J 921-22L	. PAD			Rig Name No: MILES 2/2
Event COMPLE	ETION			Start Dat	e: 3/7/201	13			End Date: 3/26/2013
Active Datum: F Level)	RKB @4,9	06,00usft (a	bove Mean Se	ea	UWI: N	W/SW/0/9	VS/21/E/2	2/0/0/26/PM/S/10	672/W/0/675/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/20/2013		-							
9/7/2013	10:00	- 11:00	1.00	SUBSPR	33	С	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES  1ST PSI TEST T/7000 PSI. HELD FOR 15 MIN LOST  67 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.  PRESSURE TEST 8 5/8 X 4 1/2 TO 480 PSI HELD FOR  5 MIN LOST -269 PSI,BLED PSI OFF, REINSTALLED POP OFF SWIFN  COULDN'T PUMP INTO SURFACE
3/18/2013	6:45	- 7:00	0.25	FRAC	48		P		HSM, SLIP TRIPS & FALLS. (MUDDY CONDITIONS)
	7:00	- 15:00	00,8	FRAC	37	В	P		MIRU CASEDHOLE SOLUTIONS. PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE, 120 DEG PHASING, RIH PERF AS PER DESIGN POOH, SWIFN.
3/19/2013	6:45	- 7:00	0.25	FRAC	48		P		HSM, SIME OPS.

4/10/2013 2:49:14PM

						KIES RE	GION ry Report	
Nell: NBU 921-	22L4BS RED						Spud Date: 11	/13/2012
roject: UTAH-	UINTAH		Site: NB	U 921-22L	. PAD		7	Rig Name No: MILES 2/2
vent: COMPL	ETION		Start Da	te: 3/7/201	13			End Date: 3/26/2013
active Datum: I evel)	RKB @4,905,00usft (a	bove Mean S	ea	UWI: N	W/SW/0/9	9/S/21/E/2	2/0/0/26/PM/S/1	872/W/0/675/0/ <b>0</b>
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 18:00	11.00	FRAC	36	В	P		FRAC STG 1)WHP 1141 PSI, BRK 3402 PSI @ 4.7 BPM. ISIP 2162 PSI, FG. 0.66 ISIP 3158 PSI, FG. 0.77, NPI 996 PSI, SWI, XO T/ WL.  PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9545 P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.  FRAC STG 2)WHP 2300 PSI, BRK 3432 PSI @ 4.7 BPM. ISIP 2292 PSI, FG. 0.68 ISIP 3049 PSI, FG. 0.76, NPI 767 PSI, SWI, XO T/ WL.  PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9303 P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.  FRAC STG 3)WHP 2078 PSI, BRK 3738 PSI @ 4.7 BPM. ISIP 2400 PSI, FG. 0.7 ISIP 3183 PSI, FG. 0.76, NPI 783 PSI. SWI, XO T/ WL.  PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9120 P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.  FRAC STG 4)WHP 1792 PSI, BRK 3370 PSI @ 4.7 BPM. ISIP 2650 PSI, FG. 0.73 ISIP 2921 PSI, FG. 0.76, NPI 271 PSI. SWI, XO T/ WL.  PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/6 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8874' P/U PERF AS PER DESIGN. POOH, SWIFN.

2

						KIES RE Summa	GION ry Report	
Well: NBU 921-	22L4BS RED	7					Spud Date: 11	/13/2012
Project: UTAH-L	JINTAH		Site: NB	U 921-22L	PAD		3.4	Rig Name No: MILES 2/2
vent COMPLE	TION		Start Da	te: 3/7/201	3			End Date; 3/26/2013
ctive Datum: R evel)	KB @4,906.00usft (a	bove Mean Se	ea .	UWI: N	WSVW0/9	a/S/21/E/2	2/0/0/26/PM/S/1	872/M/0/675/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD Frem (usft)	Operation
3/20/2013	8:00 - 18:00	10,00	FRAC	36	В	P		FRAC STG 5)WHP 2323 PSI, BRK 2868 PSI @ 4.7 BPM. ISIP 2554 PSI, FG. 0.73 ISIP 3064 PSI, FG. 0.79, NPI 510 PSI. SWI, XO T/ WL.  PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8570' P/U PERF AS PER DESIGN. POOH. XO T/ FRAC.  FRAC STG 6)WHP 1752 PSI, BRK 2821 PSI @ 4.7 BPM. ISIP 1831 PSI, FG. 0.66 ISIP 2406 PSI, FG. 0.73, NPI 525 PSI. SWI, XO T/ WL.  PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8215' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.  FRAC STG 7)WHP 1566 PSI, BRK 2574 PSI @ 4.7 BPM. ISIP 1722 PSI, FG. 0.65 ISIP 2395 PSI, FG. 0.74, NPI 673 PSI. SWI, XO T/ WL.  PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7830' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.  FRAC STG 8)WHP 1613 PSI, BRK 3122 PSI @ 5.1 BPM. ISIP 2606 PSI, FG. 0.78 ISIP 3092 PSI, FG. 0.84, NPI 486 PSI. SWIFN.  PERF STG 9)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7554' P/U PERF AS PER DESIGN. POOH. SWIFN.

4/10/2013 2:49:14PM

							KIES RE Summa	GION ry Report	
Well: NBU 921-2	22L4BS R	ED						Spud Date: 11	/13/2012
Project: UTAH-L	JINTAH			Site: NBU	J 921-22L	PAD			Rig Name No: MILES 2/2
Event: COMPLE	ETION			Start Dat	e: 3/7/201	3	14		End Date: 3/28/2013
Active Datum: R Level)	KB @4,9	06,00usft (a	bove Mean S	ea	UM: N	MSWW0/9	8/S/21/E/2	2/0/0/26/PM/S/1	672/W/0/675/0/0
Date	1	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/21/2013	7:30	- 18:00	10.50	FRAC	36	В	P		FRAC STG 9)WHP 1893 PSI, BRK 3237 PSI @ 14.9 BPM. ISIP 2516 PSI, FG. 0.78 ISIP 2525 PSI, FG. 0.78, NPI 10 PSI. SWI, XO T/ WL.  PERF STG 10)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7221' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.  FRAC STG 10)WHP 805 PSI, BRK 2139 PSI @ 5.4 BPM. ISIP 1526 PSI, FG. 0.66 ISIP 1855 PSI, FG. 0.7, NPI 329 PSI. SWI, XO T/ WL.  PERF STG 11)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET @ 6876' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.  FRAC STG 11)WHP 250 PSI, BRK 2230 PSI @ 5.1 BPM. ISIP 1623 PSI, FG. 0.68 ISIP 1645 PSI, FG. 0.68, NPI 22 PSI. SWI, XO T/ WL.  PU 4 1/2 8K HAL CBP. RIH SET KILL PLUG @ 4688'. POOH. SWI. DONE FRACING THIS WELL.  TOTAL SAND = 296,459 LBS.
- Sideles ()	7.00	4.5							TOTAL CLFL = 12,528 BBLS.
3/25/2013		- 7:15	0.25	DRLOUT	48		P		HSM, SLIPS, TRIPS & FALLS, RIG MOVE & PUTBG
	7:15	- 12:00	4,75	DRLOUT	30	A	Р		RD OFF NBU 921-20M, ROAD RIG, MIRU, SPOT EQUIP, ND WH, NU 10K BOP, RU FLOOR & TBG EQUIP.
	12:00	- 16:00	4.00	DRLOUT	46	F	Z		WAIT ON TBG.
	16:00	- 17:00	1.00	DRLOUT	31	#L	Р		SPOT TBG TRAILER, PU 3 7/8" BIT, POBS, 1.875" XN S/N TALLY & PU TBG, SWI, SDFN.
3/26/2013		7		DRLOUT	50				WELL TURNED TO SALES @ 1800 HR ON 3/26/2013, 1096 MCFD, 1920 BWPD, FCP 2030#, FTP 1947#, 20/64" CK.
	7:00	- 7:15	0.25	DRLOUT	48		P		HSM, SLPIS, TRIPS & FALLS, PU TBG, D/O PLUGS

4/10/2013 2:49:14PM

					s ROC		EGION ary Report	
Well: NBU 921-	-22L4BS RED						Spud Date: 11	/13/2012
Project: UTAH-			Site: NBL	J 921-221	L PAD			Rig Name No: MILES 2/2
Event: COMPL	Control of the Contro		Start Dat	e: 3/7/20	13			End Date: 3/26/2013
	RKB @4,906.00usft (a	ibove Mean Se	-	-		NS/21/E/2	22/0/0/28/PM/S/10	672/N/0/675/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usff)	Operation
	7:15		DRLOUT	31		P		1 OF 4, TALLY & PUTBG, RU P/S FILL TBG & BREAK CIRC, P/T BOP TO 3,000 PSI TEST GOOD, SURFACE CSG VALVE OPEN & LOCKED, D/O 11 PLUGS  C/O 20' SAND, TAG 1ST PLUG @ 6,488', 100 PSI INCREASE RIH, CSG PRESS 0 PSI.  C/O 30' SAND, TAG 2ND PLUG @ 6,876', 200 PSI INCREASE RIH, CSG PRESS 100 PSI.  C/O 30' SAND, TAG 3RD PLUG @ 7,221', 200 PSI INCREASE RIH, CSG PRESS 250 PSI.  C/O 40' SAND, TAG 4TH PLUG @ 7,554', 300 PSI INCREASE RIH, CSG PRESS 300 PSI.  C/O 40' SAND, TAG 5TH PLUG @ 7,830', 400 PSI INCREASE RIH, CSG PRESS 400 PSI.  C/O 10' SAND, TAG 5TH PLUG @ 8,215', 900 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 10' SAND, TAG 5TH PLUG @ 8,570', 1,000 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 30' SAND, TAG 7TH PLUG @ 8,570', 1,000 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 10' SAND, TAG 8TH PLUG @ 8,874', 200 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 50' SAND, TAG 9TH PLUG @ 9,100', 900 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 50' SAND, TAG 9TH PLUG @ 9,303', 600 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 50' SAND, TAG 11TH PLUG @ 9,303', 600 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O 20' SAND, TAG 11TH PLUG @ 9,546', 300 PSI INCREASE RIH, CSG PRESS 500 PSI.  C/O
								143 JTS 2 3/8" L-80 = 4,536.31 TBG

4/10/2013

2.49.14PM

D

				Opera	tion S	umma	ry Report	
Well: NBU 921-2	2L4BS RED						Spud Date: 11	/13/2012
Project: UTAH-U	NTAH		Site: NB	U 921-22L	PAD			Rig Name No: MILES 2/2
Event: COMPLE	TION		Start Dat	e: 3/7/201	3			End Date: 3/26/2013
Active Datum; Ri Level)	(B @4,906.00usft (	above Mean Se	a	UWI: N	M/SW/0/9	/S/21/E/2	2/0/0/26/PM/S/16	672/Wf0/675/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								DELIVERED 150 JTS J-55 1- 6' PUP JT N-80= 6.15'
								TOTAL=321 JTS
								150 JTS 2 3/8" J-55= 4,738,00"
								USED 293 JTS
								POBS= 2.20
								RETURNED 28 JTS L-80
								EOT @ 9,307.49
								TWTR= 12,528 BBLS
								TWR= 3,500 BBLS

4/10/2013 2:49:14PM 6

RECEIVED: Apr. 26, 2013

			NBU	921-22L4	BS SURVE	Y.txt
WELLNAME Vertical		921-22L4 re relat				
KB-ELEV		4906.00	F			
MD	0.00	0.00	0.00	0.00	0.00	0.00
20.00	0.00	0.00	20.00	0.00	0.00	0.00
192.00	0.35	40.89	192.00	0.40	0.34	0.51
278.00	1.06	40.89	277.99	1.20	1.04	1.54
361.00	1.67	42.12	360.97	2.67	2.35	3.47
451.00	1.67	43.79	450.93	4.59 7.10	4.14 6.41	6.04 9.35
541.00 631.00	2.64 3.17	42.03	540.86 630.75	10.50	9.45	13.80
721.00	3.25	41.94	720.61	14.25	12.82	18.72
811.00	3.69	54.33	810.44	17.83	10.88	24.11
901.00	3.87	60.84	900.25	21.00	21.88	30.02
991.00 1081.00	3.69 4.04	51.87	990.05 1079.85	24.27 28.18	26.81 31.45	35.94 41.98
1171.00	3.96	54.51	1169.63	32.10	36.34	48.24
1261.00	3.96	53.63	1259.42	32.10 35.75 39.16	41.37	54.46
1351.00	3.34	53.28			45.98	60.18
1441.00 1531.00	2.90 2.73	65.67 64.79	1439.10 1528.99	41.66 43.51	50.15 54.17	65.04 69.38
1621.00	2.87	59.34	1618.88	45.58	58.04	73.73
1711.00	2.87 2.99	54.95	1708.77	48.07	61.90	78.32
1801.00	2.90	51.52	1798.65	50.84	65.61	82.94
1891.00 1981.00	2.90	57.59	1888.53 1978.42	53.47 55.79	69.31 73.23	87.49 92.02
2071.00	3.43	61.37	2068.28	58.17	77.59	96.95
2161.00	3.69	62.60	2158.11	60.79	77.59 82.52	102.49
2251.00	3.17	60.14	2247.94	63.37	87.25	107.83
2341.00 2431.00	2.90 2.73	59.34 60.22	2337.82 2427.71	65.77 67.99	91.37 95.19	112.58 116.98
2521.00	3.17	60.22	2517.59	70.29	99.21	121.59
2611.00	3.61	58.64	2607.43	73.00	103.79	126.89
2701.00	3.69	49.24	2697.25	76.37	108.40	132.60
2791.00 2845.00	4.13 4.28	47.57	2787.04 2840.90	80.45 83.16	112.99 115.87	138.70 142.62
2957.00	5.33	23.92	2952.51	90.83	120.97	151.24
3051.00	5.33 4.17	28.52	3046.19	97.83	124.38	158.09
3146.00	3.26	46.27	3140.99 3234.88	102.73 105.29	127.98 131.69	163.87 168.38
3240.00 3335.00	2.34 0.92	68.33 128.54		105.53	134.09	170.47
3429.00	0.92	198.43	3423.83	104.34	134.44	170.06
3523.00	1.23	190.06	3517.82	102.63	134.03	168.73
3617.00 3712.00	$0.51 \\ 0.88$	191.10 215.69	3611.80 3706.80	101.23	133.77 133.26	167.70 166.70
3806.00	1.05	192.78	3800.78	98.79	132.65	165.37
3900.00	0.60	155.83	3894.77	97.50	132.66	164.63
3995.00	0.68	158.08	3989.77	96.53	133.08	164.40
4089.00 4183.00	0.76 0.61	175.04 176.52	4083.76	95.39 94.27	133.34	163.95 163.36
4278.00	0.83	185.54	4272.75	93.08	133.39	162.64
4372.00	0.74	134.78	4366.74	91.97	133.42 133.39 133.75	162.29
4467.00	0.71	159.31	4461.73 4555.73	90.99	134.40	162.24 161.57
4561.00 4656.00	0.69 0.88	210.74 195.47	4650.72	89.96 88.77	134.31 133.83	160.48
4750.00	0.88	233.53	4744.71	87.64	133.05	159.20
4844.00	0.97	200.48	4838.70	86.47	132.19	157.81
4938.00	0.41	185.04 348.49	4932.69 5027.69	85.39 85.28	131.89 131.81	156.93 156.81
5033.00 5127.00	0.03	4.89	5121.69	85.54	131.76	156.92
5222.00	0.14	170.98	5216.69	85.45	131.78	156.89
5316.00	0.22	179.44	5310.69	85.16	131.80 ge 1	156.73
				Pat	JE I	

Page 1

			NBU	021 221	BS SURVE	v tyt
5410.00	0.33	169.60	5404.69	84.71	131.85	156.51
5505.00	0.51	187.88	5499.68	84.02	131.84	156.10
5598.00	0.67	195.12	5592.68	83.09	131.65	155.40
5692.00	0.30	298.14	5686.68	82.67	131.29	154.86
5787.00	1.07	359.62	5781.67	83.68	131.06	155.27
5881.00	0.76	37.06	5875.66	85.05	131.43	156.37
5975.00	0.85	64.77	5969.65	85.85	132.44	157.65
6070.00	0.75	57.91	6064.64	86.48	133.60	158.96
6164.00	0.85	68.24	6158.63	87.06	134.77	160.25
6259.00	0.42	94.85	6253.62	87.29	135.77	161.20
6353.00	0.61	94.07	6347.62	87.23	136.61	161.85
6448.00	0.68	102.89	6442.61	87.07	137.67	162.61
6542.00	0.37	194.59	6536.61	86.65	138.13	162.75
6637.00	0.72	170.70	6631.61	85.76	138.15	162.25
6731.00	0.13	322.00	6725.61	85.27	138.18	161.98
6826.00	0.20	165.89	6820.60	85.19	138.16	161.91
6920.00	0.48	170.72	6914.60	84.64	138.26	161.68
7015.00	0.70	156.38	7009.60	83.72	138.56	161.38
7109.00	0.27	289.83	7103.60	83.27	138.58	161.13
7203.00	0.35	239.59	7197.59	83.20		160.72
7298.00	0.33	213.45	7292.59	82.82	137.72	160.18
7392.00	0.32	182.18	7386.59	82.33	137.56	159.77
7486.00	0.26	27.47 27.95 99.58	7480.59	82.26	137.65	159.79
7581.00	0.26	27.95	7575.59	82.64	137.85 138.03	160.18
7675.00	0.09	99.58	7669.59	82.82	138.03	160.42
7769.00	0.35	161.63	7763.59	82.53	138.19	160.39
7864.00	0.77	173.44	7858.58	81.62	138.35	159.99
7958.00	0.67	203.47	7952.58	80.49	138.21	159.21
8053.00	0.20	38.84	8047.58	80.11	138.09	158.90
8147.00	0.35	60.21	8141.57	80.38	138.44	159.34
8241.00	0.64	117.46	8235.57	80.28	139.16	159.86
8336.00	1.02	108.94	8330.56	79.76	140.43	160.59
8430.00	0.26	169.92	8424.56	79.28	141.26	160.99
8525.00	0.57	285.03	8519.55	79.19	140.84	160.59
8619.00	0.70	287.05	8613.55	79.48	139.84	159.95
8713.00	0.35	258.49	8707.54	79.59	139.01	159.34
8808.00	0.44	234.46	8802.54	79.32	138.42	158.71
8902.00	0.53	233.00	8896.54	78.85	137.78	157.91
8997.00	0.24	101.27	8991.54	78.55	137.63	157.61
10039.00	0.24	101.27	10033.53	77.69	141.91	160.59

Projection To TD Verification:

**Nick Spence** 

Drilling Engineering Manager

API Well Number: 43047525830000



Project: UTAH - UTM (feet), NAD27, Zone 12N Site: NBU 921-22L PAD

Well: NBU 921-22L4BS Wellbore: OH



		WEL	L DETAILS: NBU 93	:1-22L4BS		
		GL 488	2 & KB 24 @ 4906.00	M (HP 318)		
+N/-S 0.00	+E/AV 0.00	Northing 14536276,68	Easting 2048013.48	Latittu de 40.0189650	Longitude -109.5442250	

ANADARKO PROJECTION TO TO

1500

Vertical Section at 54.33° (1500 ft/in)

750

2250

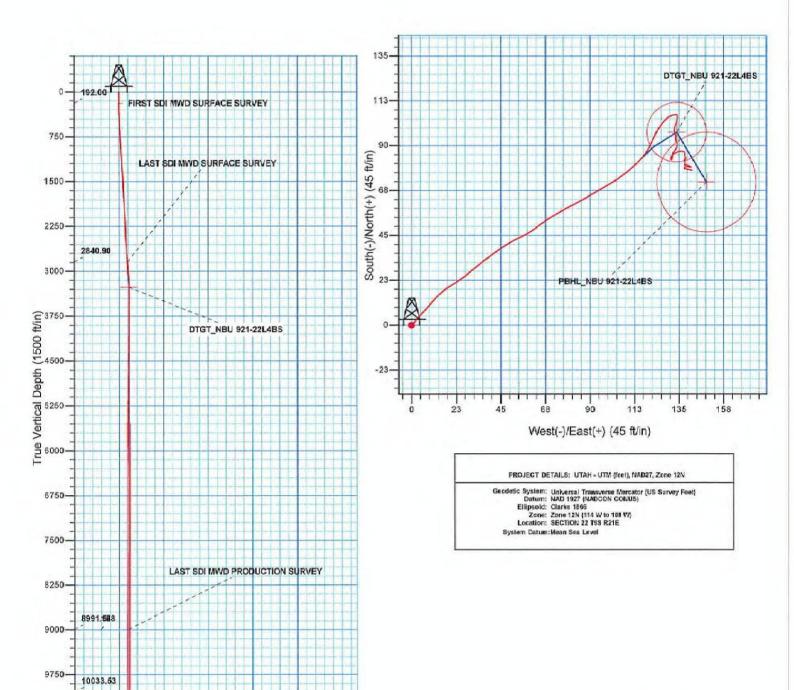
3000

3750

10500-

-750

Design: OH



Design: OH (NBU 921-22L485/OH)

Created By: RobertScott Date: 7:12, April 25 2013



## **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-22L PAD NBU 921-22L4BS

OH

Design: OH

# Standard Survey Report

26 April, 2013







Company: Project:

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

NBU 921-22L PAD Site: NBU 921-22L4BS Well:

Wellbore: OH Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method:

Database:

Well NBU 921-22L4BS

GL 4882 & KB 24 @ 4906.00ft (HP 318)

GL 4882 & KB 24 @ 4906,00ft (HP 318)

True

Minimum Curvature EDM5000-RobertS-Local

UTAH - UTM (feet), NAD27, Zone 12N Project

Map System: Geo Datum:

Map Zone:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS) Zone 12N (114 W to 108 W)

System Datum:

Mean Sea Level

Site NBU 921-22L PAD, SECTION 22 T9S R21E

Site Position: From:

Lat/Long

Northing: Easting:

14,536,264.59 usft 2,047,986.23 usft

Latitude: Longitude:

40.0189230 -109.5443230 0.94 \*

Position Uncertainty: 0.00 ft Slot Radius: 13.200 in Grid Convergence:

Well NBU 921-22L4BS, 1672 FSL 675 FWL

+N/-S Well Position +E/-W 0.00 ft 0,00 ft

Northing: Easting:

14,536,276.69 usft 2,048,013.48 usft Latitude: Longitude:

40.0189550 -109.5442250

0.00 ft Wellhead Elevation: Ground Level: 4,882.00 ft Position Uncertainty

Wellbore ОН Declination Dip Angle Field Strength Model Name Sample Date Magnetics (") (") (nT) IGRF2010 2011/11/15 11.04 65.86 52,292

Design OH **Audit Notes:** 0.00 ACTUAL Tie On Depth: Version: 1.0 Phase: Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (") (ft) 0.00 0.00 0.00 54.33

Date 2013/04/26 Survey Program From To **Tool Name** (ft) (ft) Survey (Wellbore) Description 2,845.00 Survey #1 SDI MWD SURFACE (OH) SDI MWD SDI MWD - Standard ver 1.0.1 20,00 SDI MWD SDI MWD - Standard ver 1,0,1 2.957.00 8,997.00 Survey #2 SDI MWD PRODUCTION (OH) 10,039.00 BLIND Blind drilling, where no tool is applied 10,039.00 Survey #3 ANADARKO PROJECTION (OH

Measured Depth (ft)	inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (*/100ft)	Build Rate (*100ft)	Turn Rate (°/10 <b>0f</b> t)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00
192.00	0.35	40.89	192.00	0.40	0.34	0.51	0.20	0.20	0.00
FIRST SDI N	IWD SURFACE S	BURVEY							
278.00	1.06	40.89	277.99	1.20	1.04	1,54	0.83	0.83	0.00
361.00	1.67	42.12	360,97	2.67	2.35	3.47	0.74	0.73	1.48
451.00	1.67	43.79	450.93	4.59	4.14	6.04	0.05	0.00	1.86
541.00	2.64	41.33	540.87	7.10	6.41	9.35	1.08	1.08	-2.73
631.00	3.17	42.03	630.75	10.50	9.45	13.80	0.59	0.59	0.78

2013/04/26 7:14:43AM

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COMPASS 5000.1 Build 40





Company: Project: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site: Well: NBU 921-22L PAD

NBU 921-22L4BS

Wellbore: OH
Design: OH

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method: Database: Well NBU 921-22L4BS

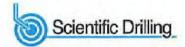
GL 4882 & KB 24 @ 4906.00ft (HP 318) GL 4882 & KB 24 @ 4906.00ft (HP 318)

True

Minimum Curvature EDM5000-RobertS-Local

Measured Depth (ft)	Inclination (°)	Azimuth	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Doglag Rate (*/160ft)	Build Rate (*/100ft)	Turn Rate (°/100ft)
721.00	3.25	41.94	720.61	14.25	12.82	18.72	0.09	0.09	-0.10
811.00	3.69	54.33	810.44	17.83	16.88	24.11	0.96	0.49	13.77
901.00	3.87	60.84	900.25	21.00	21.88	30.02	0.52	0.20	7.23
991.00	3,69	51.87	990.05	24.27	26.81	35.94	0.69	-0.20	-9.97
1,081.00	4.04	48.09	1,079.85	28.18	31.45	41.98	0.48	0.39	-4.20
1,171.00	3.96	54.51	1,169.63	32.10	36.34	48.24	0.51	-0.09	7.13
1,261.00	3.96	53.63	1,259.42	35.75	41.37	54.46	0.07	0.00	-0.98
1,351.00	3.34	53.28	1,349,23	39.16	45.98	60.18	0.69	-0.69	-0.39
1,441.00	2.90	65,67	1,439.10	41.66	50.15	65.04	0.89	-0.49	13.77
1,531.00	2.73	64.79	1,528.99	43.51	54.17	69.38	0.19	-0.19	-0.98
1,621.00	2.87	59.34	1,618.88	45.58	58.04	73.73	0,33	0.16	-6.06
1,711.00	2.99	54.95	1,708.77	48.07	61.90	78.32	0.28	0.13	-4.88
1,801.00	2,90	51.52	1,798,65	50.84	65.61	82.94	0.22	-0.10	-3.81
1,891.00	2.90	57.59	1,888.53	53.47	69.31	87.49	0.34	0.00	6.74
1,981.00	2.90	61.28	1,978.42	55.79	73.23	92.02	0.21	0.00	4.10
2,071.00	3.43	61.37	2,068.28	58.17	77.59	96.95	0.59	0.59	0.10
2,161.00	3.69	62.60	2,158.11	60.79	82.52	102.49	0.30	0.29	1.37
2,251.00	3.17	60.14	2,247.94	63.37	87.25	107.83	0.60	-0.58	-2.73
2,341.00	2.90	59.34	2,337.82	65.77	91.37	112.58	0.30	-0,30	-0.89
2,431.00	2.73	60.22	2,427.71	67.99	95.19	116.98	0.19	-0.19	0.98
2,521.00	3.17	60.22	2,517.59	70.29	99.21	121.59	0.49	0.49	0.00
2,611.00	3.61	58.64	2,607.43	73.00	103.79	126.89	0.50	0.49	-1.76
2,701.00	3.69	49.24	2,697.25	76.37	108.40	132,60	0.67	0.09	-10.44
2,791.00	4.13	47.57	2,787.04	80.45	112.99	138.70	0.50	0.49	-1.86
2,845.00	4.28	45.79	2,840.90	83.16	115.87	142.62	0.37	0.28	-3.30
LAST SOI M	IWD SURFACE S	URVEY							
2,957.00	5.33	23.92	2,952.51	90.83	120.97	151.24	1.87	0.94	-19.53
3,051.00	AWD PRODUCTI 4.17	ON SURVEY 28.52	3,046.19	97.83	124.38	158.09	1.30	-1.23	4.89
0,051.55		20,04	0,040.10						
3,146.00	3.26	46,27	3,140.99	102.73	127.98	163.87	1.53	-0.96	18.68
3,240.00	2.34	68,33	3,234.88	105.29	131.69	168,38	1.49	-0.98	23.47
3,335.00	0.92	128.54	3,329.84	105.53	134.09	170,47	2.15	-1.49	63.38
3,429.00	0.92	198.43	3,423.83	104.34	134.44	170.06	1.12	0.00	74.35
3,523.00	1.23	190.06	3,517.82	102.63	134.03	168.73	0.37	0.33	-8.90
3,617.00	0.51	191.10	3,611.80	101.23	133.77	167.70	0.77	-0.77	1.11
3,712.00	0.88	215.69	3,706.80	100.22	133.26	166.70	0.49	0.39	25.88
3,806,00	1.05	192.78	3,800.78	98.79	132.65	165.37	0.44	0.18	-24.37
3,900.00	0.60	155,83	3,894.77	97.50	132.66	164.63	0.72	-0.48	-39.31
3,995.00	0.68	158.08	3,989.77	96,53	133.08	164.40	0.09	0.08	2.37
4,089.00	0.76	175.04	4,083.76	95.39	133,34	163.95	0.24	0.09	18.04
4,183.00	0.61	176.52	4,177.75	94.27	133.42	163.36	0.16	-0.16	1.57
4,278.00	0.83	185.54	4,272.75	93.08	133,39	162,64	0,26	0.23	9.49
4,372.00	0.74	134.78	4,366.74	91.97	133,75	162,29	0.72	-0.10	-54.00
4,467.00	0.71	159.31	4,461.73	90.99	134.40	162.24	0.33	-0.03	25.82

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Company: Project: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site: Well: NBU 921-22L PAD

Well: NBU 921-22L4BS
Wellbore: OH
Design: OH

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Well NBU 921-22L4BS

GL 4882 & KB 24 @ 4905,00ft (HP 318) GL 4882 & KB 24 @ 4905,00ft (HP 318)

True

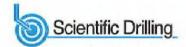
Minimum Curvature EDM5000-RobertS-Local

1: OF				Database:		E	DM5000-Rabe	rtS-Local	
,									
Measured Depth (ft)	Inclination (°)	Azimuth	Vertical Depth (fi)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (*/100ft)	Build Rate ("/100ft)	Turn Rate (°/100ft)
4,561.00	0.69	210,74	4,555.73	89.96	134.31	161.57	0.65	-0.02	54.71
4,656.00	0.88	195.47	4,650.72	88.77	133.83	160.48	0.30	0.20	-16.07
4,750.00	0.88	233.53	4,744,71	87.64	133.05	159,20	0.61	0.00	40.49
4,844.00	0.97	200.48	4,838.70	86.47	132.19	157.81	0.57	0.10	-35.16
4,938.00	0.41	185.04	4,932.69	85.39	131.89	156.93	0.62	-0.60	-16.43
5,033.00	0.29	348.49	5,027,69	85.28	131.81	156.81	0.73	-0.13	172.05
5,127.00	0.03	4.89	5,121.69	85.54	131,76	156.92	0.28	-0.28	17.45
5,222.00	0.14	170.98	5,216.69	85.45	131.78	156.89	0.18	0.12	174.83
5,316,00	0.22	179,44	5,310.69	85.16	131.80	156.73	0.09	0.09	9.00
5,410.00	0.33	169.60	5,404.69	84.71	131.85	156.51	0.13	0.12	-10.47
5,505.00	0.51	187.88	5,499.68	84,02	131.84	156.10	0.23	0.19	19.24
5,598.00	0.67	195.12	5,592.68	83.09	131.65	155,40	0,19	0.17	7.78
5,692.00	0.30	298.14	5,686.68	82.67	131.29	154.86	0.84	-0.39	109,60
5,787.00	1.07	359.62	5,781.67	83.68	131.06	155,27	1.01	0.81	64.72
5,881.00	0.76	37.06	5,875.66	85.05	131.43	156.37	0.70	-0.33	39.83
5,975.00	0.85	64.77	5,969.65	85.85	132.44	157.65	0.42	0.10	29.48
6,070.00	0.75	57.91	8,064.64	86,48	133.60	158.96	0.15	-0.11	-7.22
6,164.00	0.85	68.24	6,158.63	87.06	134.77	160.25	0.19	0.11	10.99
6,259.00	0.42	94.85	6,253.62	87.29	135,77	161.20	0.54	-0.45	28.01
6,353,00	0.61	94.07	6,347.62	87.23	136.61	161,85	0,20	0.20	-0.83
6,448.00	0.68	102.89	6,442.61	87.07	137.67	162.61	0.13	0.07	9.28
6,542.00	0,37	194.59	6,536.61	86,65	138,13	162.75	0.83	-0.33	97.55
6,637.00	0.72	170.70	6,631.61	85.76	138.15	182.25	0.43	0.37	-25.15
6,731.00	0,13	322.00	6,725,61	85.27	138.18	161.98	0.89	-0.63	160,96
6,826.00	0.20	165.89	6,820,60	85, 19	138.16	161.91	0.34	0.07	-164.33
6,920.00	0.48	170.72	6,914.60	84.64	138.26	161.68	0.30	0.30	5.14
7,015.00	0.70	156,38	7,009.60	83.72	138,56	161.38	0.28	0.23	-15.09
7,109.00	0.27	289,83	7,103.60	83.27	138.58	161.14	0.97	-0.46	141.97
7,203.00	0.35	239.59	7,197.59	83.20	138.12	160.72	0.29	0.09	-53.45
7,298.00	0.33	213.45	7,292.59	82.82	137,72	160.18	0.16	-0.02	-27.52
7,392.00	0.32	182.18	7,386.59	82.33	137.56	159.77	0.19	-0.01	-33.27
7,486.00	0.28	27.47	7,480.59	82.26	137.65	159.79	0,60	-0.06	-164.59
7,581.00	0.26	27.95	7,575.59	82.64	137.85	160.18	0.00	0.00	0.51
7,675.00	0.09	99.58	7,669.59	82.82	138.03	160.42	0.26	-0.18	76.20
7,769.00	0.35	161.63	7,763.59	82.53	138.19	160.39	0.34	0.28	66.01
7,864.00	0.77	173.44	7,858.58	81.62	138.35	159.99	0.46	0.44	12.43
7,958.00	0.67	203,47	7,952.58	80.49	138.21	159,21	0.41	-0.11	31.95
8,053.00	0.20	38.84	8,047.58	80.11	138.09	158,90	0.91	-0.49	-173.29
8,147.00	0.35	60.21	8,141.57	80,38	138.44	159,34	0.19	0.16	22.73
8,241.00	0.64	117.46	8,235.57	80.28	139.16	159.86	0.57	0,31	60.90
8,336,00	1,02	108.94	8,330.56	79.76	140.43	160.59	0.42	0.40	-8.97
8,430,00	0,26	169,92	8,424,56	79.28	141.26	160.99	0.98	-0.81	64,87
8,525.00	0.57	285,03	8,519,55	79.19	140.84	160.59	0.76	0.33	121.17

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Company: Project: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-22L PAD

 Well:
 NBU 921-22L4BS

Wellbore: OH
Design: OH

Local Co-ordinate Reference:

TVD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 921-22L4BS

GL 4882 & KB 24 @ 4906.00ft (HP 318)

GL 4882 & KB 24 @ 4906.00ft (HP 318)

True

Minimum Curvature EDM5000-RobertS-Local

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (%100ft)	Turn Rate (*/100ft)
8,619.00	0.70	287.05	8,613,55	79.48	139.84	159.95	0.14	0.14	2.15
8,713.00	0.35	258.49	8,707.54	<b>79</b> .59	139.01	159.34	0.45	-0.37	-30,38
8,808.00	0.44	234.46	8,802.54	79.32	138.42	158.71	0.20	0,09	-25.29
8,902.00	0.53	233.00	8,896.54	78.85	137.78	157.91	0.10	0.10	-1.55
8,997.00	0.24	101.27	8,991.54	78.55	137.63	157,61	0.75	-0.31	-138.66
LAST SDI M	WD PRODUCTIO	N SURVEY							
10,039,00	0.24	101.27	10.033.53	77.69	141.91	160.59	0.00	0.00	0.00

Target Name - hit/miss target - Shape	Dip Angle	Dip Dir.	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
DTGT_NBU 921-22L4B( - actual wellpath mis: - Circle (radius 15.00		0.00 ter by 8.96ft	3,266.50 at 3271.65ft	96,75 MD (3266,51	133,98 I TVD, 105,63	14,536,375,61 N, 132,76 E)	2,048,145.86	40.0192207	-109.5437466
PBHL_NBU 921-22L4B5	0.00	0.00	10,049.0	71.75	148.98	14,536,350.86	2,048,161.26	40.0191520	-109.5436930

Measured	Vertical	Local Coo	rdinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
192.00	192.00	0.40	0.34	FIRST SDI MWD SURFACE SURVEY
2,845.00	2,840.90	83,16	115.87	LAST SDI MWD SURFACE SURVEY
2,957.00	2,952.51	90.83	120.97	FIRST SDI MWD PRODUCTION SURVEY
8,997.00	8,991.54	78.55	137.63	LAST SDI MWD PRODUCTION SURVEY
10,039.00	10,033.53	77.69	141.91	ANADARKO PROJECTION TO TD

Checked By:	Approved By:	Date:	

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